

MOR0251.ST25.txt  
SEQUENCE LISTING

<110> Grasso, Luigi  
Liang, Shaohong  
Nicolaides, Nicholas C.  
Sass, Philip M.

<120> METHODS OF GENERATING HIGH-PRODUCTION OF ANTIBODIES FROM  
HYBRIDOMAS CREATED BY IN VITRO IMMUNIZATION

<130> MOR-0251

<150> US 60/427,165

<151> 2002-11-15

<150> US 60/501,650

<151> 2003-09-10

<160> 50

<170> PatentIn version 3.2

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<211> 3063

<212> DNA

<213> Homo sapiens

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## MOR0251.ST25.txt

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## MOR0251.ST25.txt

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 35 40 45  
 Phe Asp Lys Ile Glu Val Arg Asp Asn Gly Glu Gly Ile Lys Ala Val  
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 Asp Ala Pro Val Met Ala Met Lys Tyr Tyr Thr Ser Lys Ile Asn Ser  
 65 70 75 80  
 His Glu Asp Leu Glu Asn Leu Thr Thr Tyr Gly Phe Arg Gly Glu Ala  
 85 90 95  
 Leu Gly Ser Ile Cys Cys Ile Ala Glu Val Leu Ile Thr Thr Arg Thr  
 100 105 110  
 Ala Ala Asp Asn Phe Ser Thr Gln Tyr Val Leu Asp Gly Ser Gly His  
 115 120 125  
 Ile Leu Ser Gln Lys Pro Ser His Leu Gly Gln Gly Thr Thr Val Thr  
 130 135 140  
 Ala Leu Arg Leu Phe Lys Asn Leu Pro Val Arg Lys Gln Phe Tyr Ser  
 145 150 155 160  
 Thr Ala Lys Lys Cys Lys Asp Glu Ile Lys Lys Ile Gln Asp Leu Leu  
 165 170 175  
 Met Ser Phe Gly Ile Leu Lys Pro Asp Leu Arg Ile Val Phe Val His  
 180 185 190  
 Asn Lys Ala Val Ile Trp Gln Lys Ser Arg Val Ser Asp His Lys Met  
 195 200 205  
 Ala Leu Met Ser Val Leu Gly Thr Ala Val Met Asn Asn Met Glu Ser  
 210 215 220  
 Phe Gln Tyr His Ser Glu Glu Ser Gln Ile Tyr Leu Ser Gly Phe Leu  
 225 230 235 240  
 Pro Lys Cys Asp Ala Asp His Ser Phe Thr Ser Leu Ser Thr Pro Glu  
 245 250 255  
 Arg Ser Phe Ile Phe Ile Asn Ser Arg Pro Val His Gln Lys Asp Ile  
 260 265 270  
 Leu Lys Leu Ile Arg His His Tyr Asn Leu Lys Cys Leu Lys Glu Ser  
 275 280 285

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Thr Arg Leu Tyr Pro Val Phe Phe Leu Lys Ile Asp Val Pro Thr Ala
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Asp Val Asp Val Asn Leu Thr Pro Asp Lys Ser Gln Val Leu Leu Gln
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Asn Lys Glu Ser Val Leu Ile Ala Leu Glu Asn Leu Met Thr Thr Cys
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Tyr Gly Pro Leu Pro Ser Thr Asn Ser Tyr Glu Asn Asn Lys Thr Asp
                340                345                350

Val Ser Ala Ala Asp Ile Val Leu Ser Lys Thr Ala Glu Thr Asp Val
                355                360                365

Leu Phe Asn Lys Val Glu Ser Ser Gly Lys Asn Tyr Ser Asn Val Asp
 370                375                380

Thr Ser Val Ile Pro Phe Gln Asn Asp Met His Asn Asp Glu Ser Gly
385                390                395                400

Lys Asn Thr Asp Asp Cys Leu Asn His Gln Ile Ser Ile Gly Asp Phe
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Gly Tyr Gly His Cys Ser Ser Glu Ile Ser Asn Ile Asp Lys Asn Thr
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Lys Asn Ala Phe Gln Asp Ile Ser Met Ser Asn Val Ser Trp Glu Asn
                435                440                445

Ser Gln Thr Glu Tyr Ser Lys Thr Cys Phe Ile Ser Ser Val Lys His
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Thr Gln Ser Glu Asn Gly Asn Lys Asp His Ile Asp Glu Ser Gly Glu
465                470                475                480

Asn Glu Glu Glu Ala Gly Leu Glu Asn Ser Ser Glu Ile Ser Ala Asp
                485                490                495

Glu Trp Ser Arg Gly Asn Ile Leu Lys Asn Ser Val Gly Glu Asn Ile
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Glu Pro Val Lys Ile Leu Val Pro Glu Lys Ser Leu Pro Cys Lys Val
                515                520                525

Ser Asn Asn Asn Tyr Pro Ile Pro Glu Gln Met Asn Leu Asn Glu Asp
 530                535                540

Ser Cys Asn Lys Lys Ser Asn Val Ile Asp Asn Lys Ser Gly Lys Val
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## MOR0251.ST25.txt

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Ala Ser Ala Leu Phe Val Gln Asp His Arg Pro Gln Phe Leu Ile Glu  
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Asn Pro Lys Thr Ser Leu Glu Asp Ala Thr Leu Gln Ile Glu Glu Leu  
 595 600 605

Trp Lys Thr Leu Ser Glu Glu Glu Lys Leu Lys Tyr Glu Glu Lys Ala  
 610 615 620

Thr Lys Asp Leu Glu Arg Tyr Asn Ser Gln Met Lys Arg Ala Ile Glu  
 625 630 635 640

Gln Glu Ser Gln Met Ser Leu Lys Asp Gly Arg Lys Lys Ile Lys Pro  
 645 650 655

Thr Ser Ala Trp Asn Leu Ala Gln Lys His Lys Leu Lys Thr Ser Leu  
 660 665 670

Ser Asn Gln Pro Lys Leu Asp Glu Leu Leu Gln Ser Gln Ile Glu Lys  
 675 680 685

Arg Arg Ser Gln Asn Ile Lys Met Val Gln Ile Pro Phe Ser Met Lys  
 690 695 700

Asn Leu Lys Ile Asn Phe Lys Lys Gln Asn Lys Val Asp Leu Glu Glu  
 705 710 715 720

Lys Asp Glu Pro Cys Leu Ile His Asn Leu Arg Phe Pro Asp Ala Trp  
 725 730 735

Leu Met Thr Ser Lys Thr Glu Val Met Leu Leu Asn Pro Tyr Arg Val  
 740 745 750

Glu Glu Ala Leu Leu Phe Lys Arg Leu Leu Glu Asn His Lys Leu Pro  
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Ala Glu Pro Leu Glu Lys Pro Ile Met Leu Thr Glu Ser Leu Phe Asn  
 770 775 780

Gly Ser His Tyr Leu Asp Val Leu Tyr Lys Met Thr Ala Asp Asp Gln  
 785 790 795 800

Arg Tyr Ser Gly Ser Thr Tyr Leu Ser Asp Pro Arg Leu Thr Ala Asn  
 805 810 815

Gly Phe Lys Ile Lys Leu Ile Pro Gly Val Ser Ile Thr Glu Asn Tyr  
 820 825 830

Leu Glu Ile Glu Gly Met Ala Asn Cys Leu Pro Phe Tyr Gly Val Ala  
 835 840 845

Asp Leu Lys Glu Ile Leu Asn Ala Ile Leu Asn Arg Asn Ala Lys Glu  
 850 855 860

Val Tyr Glu Cys Arg Pro Arg Lys Val Ile Ser Tyr Leu Glu Gly Glu  
 865 870 875 880

Ala Val Arg Leu Ser Arg Gln Leu Pro Met Tyr Leu Ser Lys Glu Asp  
 885 890 895

Ile Gln Asp Ile Ile Tyr Arg Met Lys His Gln Phe Gly Asn Glu Ile  
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Lys Glu Cys Val His Gly Arg Pro Phe Phe His His Leu Thr Tyr Leu  
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Pro Glu Thr Thr  
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## MOR0251.ST25.txt

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<400> 4
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20          25          30

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Leu Asp Ala Gly Ala Thr Ser Val Asp Val Lys Leu Glu Asn Tyr Gly  
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 Phe Asp Lys Ile Glu Val Arg Asp Asn Gly Glu Gly Ile Lys Ala Val  
 50 55 60  
 Asp Ala Pro Val Met Ala Met Lys Tyr Tyr Thr Ser Lys Ile Asn Ser  
 65 70 75 80  
 His Glu Asp Leu Glu Asn Leu Thr Thr Tyr Gly Phe Arg Gly Glu Ala  
 85 90 95  
 Leu Gly Ser Ile Cys Cys Ile Ala Glu Val Leu Ile Thr Thr Arg Thr  
 100 105 110  
 Ala Ala Asp Asn Phe Ser Thr Gln Tyr Val Leu Asp Gly Ser Gly His  
 115 120 125  
 Ile Leu Ser Gln Lys Pro Ser His Leu Gly Gln Gly Thr Thr Val Thr  
 130 135 140  
 Ala Leu Arg Leu Phe Lys Asn Leu Pro Val Arg Lys Gln Phe Tyr Ser  
 145 150 155 160  
 Thr Ala Lys Lys Cys Lys Asp Glu Ile Lys Lys Ile Gln Asp Leu Leu  
 165 170 175  
 Met Ser Phe Gly Ile Leu Lys Pro Asp Leu Arg Ile Val Phe Val His  
 180 185 190  
 Asn Lys Ala Val Ile Trp Gln Lys Ser Arg Val Ser Asp His Lys Met  
 195 200 205  
 Ala Leu Met Ser Val Leu Gly Thr Ala Val Met Asn Asn Met Glu Ser  
 210 215 220  
 Phe Gln Tyr His Ser Glu Glu Ser Gln Ile Tyr Leu Ser Gly Phe Leu  
 225 230 235 240  
 Pro Lys Cys Asp Ala Asp His Ser Phe Thr Ser Leu Ser Thr Pro Glu  
 245 250 255  
 Arg Ser Phe Ile Phe Ile Asn Ser Arg Pro Val His Gln Lys Asp Ile  
 260 265 270  
 Leu Lys Leu Ile Arg His His Tyr Asn Leu Lys Cys Leu Lys Glu Ser  
 275 280 285  
 Thr Arg Leu Tyr Pro Val Phe Phe Leu Lys Ile Asp Val Pro Thr Ala  
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## MOR0251.ST25.txt

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 325 330 335

Tyr Gly Pro Leu Pro Ser Thr Asn Ser Tyr Glu Asn Asn Lys Thr Asp  
 340 345 350

Val Ser Ala Ala Asp Ile Val Leu Ser Lys Thr Ala Glu Thr Asp Val  
 355 360 365

Leu Phe Asn Lys Val Glu Ser Ser Gly Lys Asn Tyr Ser Asn Val Asp  
 370 375 380

Thr Ser Val Ile Pro Phe Gln Asn Asp Met His Asn Asp Glu Ser Gly  
 385 390 395 400

Lys Asn Thr Asp Asp Cys Leu Asn His Gln Ile Ser Ile Gly Asp Phe  
 405 410 415

Gly Tyr Gly His Cys Ser Ser Glu Ile Ser Asn Ile Asp Lys Asn Thr  
 420 425 430

Lys Asn Ala Phe Gln Asp Ile Ser Met Ser Asn Val Ser Trp Glu Asn  
 435 440 445

Ser Gln Thr Glu Tyr Ser Lys Thr Cys Phe Ile Ser Ser Val Lys His  
 450 455 460

Thr Gln Ser Glu Asn Gly Asn Lys Asp His Ile Asp Glu Ser Gly Glu  
 465 470 475 480

Asn Glu Glu Glu Ala Gly Leu Glu Asn Ser Ser Glu Ile Ser Ala Asp  
 485 490 495

Glu Trp Ser Arg Gly Asn Ile Leu Lys Asn Ser Val Gly Glu Asn Ile  
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Glu Pro Val Lys Ile Leu Val Pro Glu Lys Ser Leu Pro Cys Lys Val  
 515 520 525

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Ser Cys Asn Lys Lys Ser Asn Val Ile Asp Asn Lys Ser Gly Lys Val  
 545 550 555 560

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Ala Ser Ala Leu Phe Val Gln Asp His Arg Pro Gln Phe Leu Ile Glu  
 580 585 590

Asn Pro Lys Thr Ser Leu Glu Asp Ala Thr Leu Gln Ile Glu Glu Leu  
 595 600 605

Trp Lys Thr Leu Ser Glu Glu Glu Lys Leu Lys Tyr Glu Glu Lys Ala  
 610 615 620

Thr Lys Asp Leu Glu Arg Tyr Asn Ser Gln Met Lys Arg Ala Ile Glu  
 625 630 635 640

Gln Glu Ser Gln Met Ser Leu Lys Asp Gly Arg Lys Lys Ile Lys Pro  
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Arg Arg Ser Gln Asn Ile Lys Met Val Gln Ile Pro Phe Ser Met Lys  
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Lys Asp Glu Pro Cys Leu Ile His Asn Leu Arg Phe Pro Asp Ala Trp  
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Leu Met Thr Ser Lys Thr Glu Val Met Leu Leu Asn Pro Tyr Arg Val  
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Glu Glu Ala Leu Leu Phe Lys Arg Leu Leu Glu Asn His Lys Leu Pro  
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Gly Ser His Tyr Leu Asp Val Leu Tyr Lys Met Thr Ala Asp Asp Gln  
 785 790 795 800

Arg Tyr Ser Gly Ser Thr Tyr Leu Ser Asp Pro Arg Leu Thr Ala Asn  
 805 810 815

Gly Phe Lys Ile Lys Leu Ile Pro Gly Val Ser Ile Thr Glu Asn Tyr  
 820 825 830

Leu Glu Ile Glu Gly Met Ala Asn Cys Leu Pro Phe Tyr Gly Val Ala  
 835 840 845

Asp Leu Lys Glu Ile Leu Asn Ala Ile Leu Asn Arg Asn Ala Lys Glu  
 850 855 860

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Val Tyr Glu Cys Arg Pro Arg Lys Val Ile Ser Tyr Leu Glu Gly Glu  
865 870 875 880

Ala Val Arg Leu Ser Arg Gln Leu Pro Met Tyr Leu Ser Lys Glu Asp  
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Ile Gln Asp Ile Ile Tyr Arg Met Lys His Gln Phe Gly Asn Glu Ile  
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Lys Glu Cys Val His Gly Arg Pro Phe Phe His His Leu Thr Tyr Leu  
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Pro Glu Thr Thr  
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ctgagtctaa gcactgcggt aaaggagtta gtagaaaaca gtctggatgc tggtgccact 180  
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caagagtttg cgcacctaac tcaggttgaa acttttggct ttcgggggga agctctgagc 360  
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Ile Ile Thr Ser Val Val Ser Val Val Lys Glu Leu Ile Glu Asn Ser  
20 25 30

Leu Asp Ala Gly Ala Thr Ser Val Asp Val Lys Leu Glu Asn Tyr Gly  
35 40 45

Phe Asp Lys Ile Glu Val Arg Asp Asn Gly Glu Gly Ile Lys Ala Val  
50 55 60

Asp Ala Pro Val Met Ala Met Lys Tyr Tyr Thr Ser Lys Ile Asn Ser  
65 70 75 80

His Glu Asp Leu Glu Asn Leu Thr Thr Tyr Gly Phe Arg Gly Glu Ala  
 85 90 95

Leu Gly Ser Ile Cys Cys Ile Ala Glu Val Leu Ile Thr Thr Arg Thr  
 100 105 110

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Ile Leu Ser Gln Lys  
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 ttggggagcc agtacatgca ggtgggctcc acacggagag gggcgagac ccggtgacag 120  
 ggctttacct ggtacatcgg catggcgcaa ccaagcaag agagggtggc gcgtgccaga 180  
 caccaacggt cggaaccgc cagacaccaa cggtcggaaa ccgccaagac accaacgctc 240  
 ggaaaccgcc agacaccaac gctcggaaac cgccagacac caaggctcgg aatccacgcc 300  
 aggccacgac ggagggcgac tacctccctt ctgaccctgc tgctggcggt cggaacaaac 360  
 gcagtccggt gtgctctgat tgggtccaggc tctttgacgt cacggactcg acctttgaca 420  
 gagccactag gcgaaaagga gagacgggaa gtatTTTTTt cggcccgccc ggaaagggtg 480  
 gagcacaacg tcgaaagcag ccgttgggag cccaggaggc ggggcgcctg tgggagccgt 540  
 ggagggaact ttcccagtcc ccgaggcgga tccggtgttg catccttgga gcgagctgag 600  
 aactcga<sup>g</sup>ta cagaacctgc taaggccatc aaacctattg atcgaagtc agtccatcag 660  
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 aacagtctgg atgctggtgc cactaatgtt gatctaaagc ttaaggacta tggagtggat 780  
 ctattgaag tttcaggcaa tggatgtggg gtagaagaag aaaacttcga aggctttact 840  
 ctgaaacatc acacatgtaa gattcaagag tttgccgacc taactcaggt ggaaactttt 900  
 ggctttcggg gggaagctct gagctcactt tgtgcactga gtgatgtcac catttctacc 960  
 tgccgtgtat cagcgaaggt tgggactcga ctggtgtttg atcactatgg gaaaatcatc 1020  
 cagaaaaccc cctacccccg cccagagggt atgacagtca gcgtgaagca gttatTTTct 1080  
 acgctacctg tgcaccataa agaatttcaa aggaatatta agaagaaacg tgcctgcttc 1140  
 cccttcgcct tctgccgtga ttgtcagttt cctgaggcct cccagccat gcttcctgta 1200  
 cagcctgtag aactgactcc tagaagtacc ccacccacc cctgctcctt ggaggacaac 1260  
 gtgatcactg tattcagctc tgtcaagaat ggtccagggt cttctagatg atctgcacaa 1320  
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 aatccaaaaa aaaaaaaaaa aaaaaaaa 1408

<210> 8  
 <211> 389  
 <212> PRT  
 <213> Homo sapiens

<400> 8

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Met Ala Gln Pro Lys Gln Glu Arg Val Ala Arg Ala Arg His Gln Arg
1          5          10          15

Ser Glu Thr Ala Arg His Gln Arg Ser Glu Thr Ala Lys Thr Pro Thr
          20          25          30

Leu Gly Asn Arg Gln Thr Pro Thr Leu Gly Asn Arg Gln Thr Pro Arg
          35          40          45

Leu Gly Ile His Ala Arg Pro Arg Arg Arg Ala Thr Thr Ser Leu Leu
          50          55          60

Thr Leu Leu Leu Ala Phe Gly Lys Asn Ala Val Arg Cys Ala Leu Ile
          65          70          75          80

Gly Pro Gly Ser Leu Thr Ser Arg Thr Arg Pro Leu Thr Glu Pro Leu
          85          90          95

Gly Glu Lys Glu Arg Arg Glu Val Phe Phe Pro Pro Arg Pro Glu Arg
          100          105          110

Val Glu His Asn Val Glu Ser Ser Arg Trp Glu Pro Arg Arg Arg Gly
          115          120          125

Ala Cys Gly Ser Arg Gly Gly Asn Phe Pro Ser Pro Arg Gly Gly Ser
          130          135          140

Gly Val Ala Ser Leu Glu Arg Ala Glu Asn Ser Ser Thr Glu Pro Ala
          145          150          155          160

Lys Ala Ile Lys Pro Ile Asp Arg Lys Ser Val His Gln Ile Cys Ser
          165          170          175

Gly Pro Val Val Pro Ser Leu Arg Pro Asn Ala Val Lys Glu Leu Val
          180          185          190

Glu Asn Ser Leu Asp Ala Gly Ala Thr Asn Val Asp Leu Lys Leu Lys
          195          200          205

Asp Tyr Gly Val Asp Leu Ile Glu Val Ser Gly Asn Gly Cys Gly Val
          210          215          220

Glu Glu Glu Asn Phe Glu Gly Phe Thr Leu Lys His His Thr Cys Lys
          225          230          235          240

Ile Gln Glu Phe Ala Asp Leu Thr Gln Val Glu Thr Phe Gly Phe Arg
          245          250          255

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Gly Glu Ala Leu Ser Ser Leu Cys Ala Leu Ser Asp Val Thr Ile Ser  
 260 265 270

Thr Cys Arg Val Ser Ala Lys Val Gly Thr Arg Leu Val Phe Asp His  
 275 280 285

Tyr Gly Lys Ile Ile Gln Lys Thr Pro Tyr Pro Arg Pro Arg Gly Met  
 290 295 300

Thr Val Ser Val Lys Gln Leu Phe Ser Thr Leu Pro Val His His Lys  
 305 310 315 320

Glu Phe Gln Arg Asn Ile Lys Lys Lys Arg Ala Cys Phe Pro Phe Ala  
 325 330 335

Phe Cys Arg Asp Cys Gln Phe Pro Glu Ala Ser Pro Ala Met Leu Pro  
 340 345 350

Val Gln Pro Val Glu Leu Thr Pro Arg Ser Thr Pro Pro His Pro Cys  
 355 360 365

Ser Leu Glu Asp Asn Val Ile Thr Val Phe Ser Ser Val Lys Asn Gly  
 370 375 380

Pro Gly Ser Ser Arg  
 385

<210> 9  
 <211> 1785  
 <212> DNA  
 <213> Homo sapiens

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 gggagctgca gaccagtctt ccgtggcagg ctgagcgctc cagtcttcag tagggaattg 180  
 ctgaataggc acagagggca cctgtacacc ttcagaccag tctgcaacct caggctgagt 240  
 agcagtgaac tcaggagcgg gagcagtgca ttcaccctga aattcctcct tggtcactgc 300  
 cttctcagca gcagcctgct cttctttttc aatctcttca ggatctctgt agaagtacag 360  
 atcaggcatg acctcccatt ggtgttcacg ggaaatgggt ccacgcatgc gcagaacttc 420  
 ccgagccagc atccaccaca ttaaaccac tgagttagct cccttggtgt tgcattggat 480  
 ggcaatgtcc acatagcgca gaggagaatc tgtgttacac agcgcaatgg taggtaggtt 540  
 aacataagat gcctccgtga gaggcgaagg ggcggcgga cccgggcctg gcccgatatg 600  
 gtccttggcg gcctagacta ggccgtcgct gtatgggtgag ccccgaggag gcggatctgg 660  
 gccccagaa ggacaccgc ctggatttgc cccgtagccc ggcccgggc cctcgggagc 720  
 agaacagcct tggtaggtg gacaggagg gacctcgca gcagacgcgc gcgccagcga 780

## MOR0251.ST25.txt

cagcagcccc gccccggcct ctcgaggacc ggggggcaga ggctgcggag cccagagg 840  
 gtctatcagc cacagtctct gcatgtttcc aagagcaaca ggaaatgaac acattgcagg 900  
 ggccagtgtc attcaaagat gtggctgtgg atttcaccca ggaggagtgg cggcaactgg 960  
 accctgatga gaagatagca tacggggatg tgatgttgga gaactacagc catctagttt 1020  
 ctgtggggta tgattatcac caagccaaac atcatcatgg agtggagggtg aaggaagtgg 1080  
 agcagggaga ggagccgtgg ataatggaag gtgaatttcc atgtcaacat agtccagaac 1140  
 ctgctaaggc catcaaacct attgatcgga agtcagtcca tcagatttgc tctgggccag 1200  
 tggtagctag tctaagcact gcagtgaagg agttagtaga aaacagtctg gatgctggtg 1260  
 ccactaatat tgatctaaag cttaaggact atggagtggg tctcattgaa gtttcagaca 1320  
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 cacacatgta agattcaaga gtttgccgac ctaactgaag ttgaaacttt cggttttcag 1440  
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 ttggtgaagg ttgggactcg actggtgttt gatcacgatg ggaaaatcat ccaggaaacc 1560  
 ccctaccccc accccagagg gaccacagtc agcgtgaagc agttattttc tacgctacct 1620  
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 ctgccgtgat tgtagtcttc ctgaggcctc cccagccatg cttcctgtac agcctgcaga 1740  
 actgtgagtc aattaaacct cttttcttca taaattaaaa aaaaa 1785

<210> 10  
 <211> 264  
 <212> PRT  
 <213> Homo sapiens

<400> 10

Met Cys Pro Trp Arg Pro Arg Leu Gly Arg Arg Cys Met Val Ser Pro  
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Arg Glu Ala Asp Leu Gly Pro Gln Lys Asp Thr Arg Leu Asp Leu Pro  
20 25 30

Arg Ser Pro Ala Arg Ala Pro Arg Glu Gln Asn Ser Leu Gly Glu Val  
35 40 45

Asp Arg Arg Gly Pro Arg Glu Gln Thr Arg Ala Pro Ala Thr Ala Ala  
50 55 60

Pro Pro Arg Pro Leu Gly Ser Arg Gly Ala Glu Ala Ala Glu Pro Gln  
65 70 75 80

Glu Gly Leu Ser Ala Thr Val Ser Ala Cys Phe Gln Glu Gln Gln Glu  
85 90 95

Met Asn Thr Leu Gln Gly Pro Val Ser Phe Lys Asp Val Ala Val Asp  
100 105 110

## MOR0251.ST25.txt

Phe Thr Gln Glu Glu Trp Arg Gln Leu Asp Pro Asp Glu Lys Ile Ala  
 115 120 125

Tyr Gly Asp Val Met Leu Glu Asn Tyr Ser His Leu Val Ser Val Gly  
 130 135 140

Tyr Asp Tyr His Gln Ala Lys His His His Gly Val Glu Val Lys Glu  
 145 150 155 160

Val Glu Gln Gly Glu Glu Pro Trp Ile Met Glu Gly Glu Phe Pro Cys  
 165 170 175

Gln His Ser Pro Glu Pro Ala Lys Ala Ile Lys Pro Ile Asp Arg Lys  
 180 185 190

Ser Val His Gln Ile Cys Ser Gly Pro Val Val Leu Ser Leu Ser Thr  
 195 200 205

Ala Val Lys Glu Leu Val Glu Asn Ser Leu Asp Ala Gly Ala Thr Asn  
 210 215 220

Ile Asp Leu Lys Leu Lys Asp Tyr Gly Val Asp Leu Ile Glu Val Ser  
 225 230 235 240

Asp Asn Gly Cys Gly Val Glu Glu Glu Asn Phe Glu Gly Leu Ile Ser  
 245 250 255

Phe Ser Ser Glu Thr Ser His Met  
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<210> 11  
 <211> 2271  
 <212> DNA  
 <213> Homo sapiens

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 gatgcaaaat ccacaagtat tcaagtgatt gttaaagagg gaggcctgaa gttgattcag 180  
 atccaagaca atggcaccgg gatcaggaaa gaagatctgg atattgtatg tgaaaggttc 240  
 actactagta aactgcagtc ctttgaggat ttagccagta tttctaccta tggctttcga 300  
 ggtgaggctt tggccagcat aagccatgtg gctcatgtta ctattacaac gaaaacagct 360  
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 ccatgtgctg gcaatcaagg gaccagatc acggtggagg acctttttta caacatagcc 480  
 acgaggagaa aagctttaaa aaatccaagt gaagaatatg ggaaaatttt ggaagttggt 540  
 ggcaggtatt cagtacacaa tgcaggcatt agtttctcag ttaaaaaaca aggagagaca 600  
 gtagctgatg ttaggacact acccaatgcc tcaaccgtgg acaatattcg ctccatcttt 660  
 ggaaatgctg ttagtcgaga actgatagaa attggatgtg aggataaaac cctagccttc 720



## MOR0251.ST25.txt

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ttcatcaacc atcgtctggt agaatcaact tccttgagaa aagccataga aacagtgtat 840
gcagcctatt tgcccaaaaa cacacacca ttctgtacc tcagtttaga aatcagtccc 900
cagaatgtgg atgttaatgt gcaccccaca aagcatgaag ttcacttctc gcacgaggag 960
agcatcctgg agcgggtgca gcagcacatc gagagcaagc tcctgggctc caattcctcc 1020
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aaatccacaa caagtctgac ctgctcttct acttctggaa gtagtgataa ggtctatgcc 1140
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agcaaaccctc tgtccagtca gcccaggcc attgtcacag aggataagac agatatttct 1260
agtggcaggg ctaggcagca agatgaggag atgcttgaac tcccagcccc tgctgaagtg 1320
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aagagaggac ctacttcag caaccccaga aagagacatc gggaagattc tgatgtggaa 1440
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gcacagcatc aaaccaagtt ataccttctc aacaccacca agcttagtga agaactgttc 1680
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cttctgattg acaactatgt gcccctttg gagggactgc ctatcttcat tcttcgacta 1980
gccactgagg tgaattggga cgaagaaaag gaatgttttg aaagcctcag taaagaatgc 2040
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tataaagcct tgcgctcaca cattctgcct cctaaacatt tcacagaaga tggaaatata 2220
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&lt;210&gt; 12

&lt;211&gt; 2484

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 12

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Cys Thr Thr Gly Gly Cys Thr Cys Thr Thr Cys Thr Gly Gly Cys Gly
1           5           10           15

```

```

Cys Cys Ala Ala Ala Ala Thr Gly Thr Cys Gly Thr Thr Cys Gly Thr
20           25           30

```

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Gly Gly Cys Ala Gly Gly Gly Gly Thr Thr Ala Thr Thr Cys Gly Gly
35           40           45

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Cys Gly Gly Cys Thr Gly Gly Ala Cys Gly Ala Gly Ala Cys Ala Gly  
 50 55 60  
 Thr Gly Gly Thr Gly Ala Ala Cys Cys Gly Cys Ala Thr Cys Gly Cys  
 65 70 75 80  
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 85 90 95  
 Cys Ala Gly Cys Gly Gly Cys Cys Ala Gly Cys Thr Ala Ala Thr Gly  
 100 105 110  
 Cys Thr Ala Thr Cys Ala Ala Ala Gly Ala Gly Ala Thr Gly Ala Thr  
 115 120 125  
 Thr Gly Ala Gly Ala Ala Cys Thr Gly Thr Thr Thr Ala Gly Ala Thr  
 130 135 140  
 Gly Cys Ala Ala Ala Ala Thr Cys Cys Ala Cys Ala Ala Gly Thr Ala  
 145 150 155 160  
 Thr Thr Cys Ala Ala Gly Thr Gly Ala Thr Thr Gly Thr Thr Ala Ala  
 165 170 175  
 Ala Gly Ala Gly Gly Gly Ala Gly Gly Cys Cys Thr Gly Ala Ala Gly  
 180 185 190  
 Thr Thr Gly Ala Thr Thr Cys Ala Gly Ala Thr Cys Cys Ala Ala Gly  
 195 200 205  
 Ala Cys Ala Ala Thr Gly Gly Cys Ala Cys Cys Gly Gly Gly Ala Thr  
 210 215 220  
 Cys Ala Gly Gly Ala Ala Ala Gly Ala Ala Gly Ala Thr Cys Thr Gly  
 225 230 235 240  
 Gly Ala Thr Ala Thr Thr Gly Thr Ala Thr Gly Thr Gly Ala Ala Ala  
 245 250 255  
 Gly Gly Thr Thr Cys Ala Cys Thr Ala Cys Thr Ala Gly Thr Ala Ala  
 260 265 270  
 Ala Cys Thr Gly Cys Ala Gly Thr Cys Cys Thr Thr Thr Gly Ala Gly  
 275 280 285  
 Gly Ala Thr Thr Thr Ala Gly Cys Cys Ala Gly Thr Ala Thr Thr Thr  
 290 295 300  
 Cys Thr Ala Cys Cys Thr Ala Thr Gly Gly Cys Thr Thr Thr Cys Gly  
 305 310 315 320

Ala Gly Gly Thr Gly Ala Gly Gly Cys Thr Thr Thr Gly Gly Cys Cys  
325 330 335

Ala Gly Cys Ala Thr Ala Ala Gly Cys Cys Ala Thr Gly Thr Gly Gly  
340 345 350

Cys Thr Cys Ala Thr Gly Thr Thr Ala Cys Thr Ala Thr Thr Ala Cys  
355 360 365

Ala Ala Cys Gly Ala Ala Ala Ala Cys Ala Gly Cys Thr Gly Ala Thr  
370 375 380

Gly Gly Ala Ala Ala Gly Thr Gly Thr Gly Cys Ala Thr Ala Cys Ala  
385 390 395 400

Gly Ala Gly Cys Ala Ala Gly Thr Thr Ala Cys Thr Cys Ala Gly Ala  
405 410 415

Thr Gly Gly Ala Ala Ala Ala Cys Thr Gly Ala Ala Ala Gly Cys Cys  
420 425 430

Cys Cys Thr Cys Cys Thr Ala Ala Ala Cys Cys Ala Thr Gly Thr Gly  
435 440 445

Cys Thr Gly Gly Cys Ala Ala Thr Cys Ala Ala Gly Gly Gly Ala Cys  
450 455 460

Cys Cys Ala Gly Ala Thr Cys Ala Cys Gly Gly Thr Gly Gly Ala Gly  
465 470 475 480

Gly Ala Cys Cys Thr Thr Thr Thr Thr Ala Cys Ala Ala Cys Ala  
485 490 495

Thr Ala Gly Cys Cys Ala Cys Gly Ala Gly Gly Ala Gly Ala Ala Ala  
500 505 510

Ala Gly Cys Thr Thr Thr Ala Ala Ala Ala Ala Thr Cys Cys Ala  
515 520 525

Ala Gly Thr Gly Ala Ala Gly Ala Ala Thr Ala Thr Gly Gly Gly Ala  
530 535 540

Ala Ala Ala Thr Thr Thr Thr Gly Gly Ala Ala Gly Thr Thr Gly Thr  
545 550 555 560

Thr Gly Gly Cys Ala Gly Gly Thr Ala Thr Thr Cys Ala Gly Thr Ala  
565 570 575

Cys Ala Cys Ala Ala Thr Gly Cys Ala Gly Gly Cys Ala Thr Thr Ala  
580 585 590

Gly Thr Thr Thr Cys Thr Cys Ala Gly Thr Thr Ala Ala Ala Ala Ala  
595 600 605

Ala Cys Ala Ala Gly Gly Ala Gly Ala Gly Ala Cys Ala Gly Thr Ala  
 610 615 620  
 Gly Cys Thr Gly Ala Thr Gly Thr Thr Ala Gly Gly Ala Cys Ala Cys  
 625 630 635 640  
 Thr Ala Cys Cys Cys Ala Ala Thr Gly Cys Cys Thr Cys Ala Ala Cys  
 645 650 655  
 Cys Gly Thr Gly Gly Ala Cys Ala Ala Thr Ala Thr Thr Cys Gly Cys  
 660 665 670  
 Thr Cys Cys Ala Thr Cys Thr Thr Thr Gly Gly Ala Ala Ala Thr Gly  
 675 680 685  
 Cys Thr Gly Thr Thr Ala Gly Thr Cys Gly Ala Gly Ala Ala Cys Thr  
 690 695 700  
 Gly Ala Thr Ala Gly Ala Ala Ala Thr Thr Gly Gly Ala Thr Gly Thr  
 705 710 715 720  
 Gly Ala Gly Gly Ala Thr Ala Ala Ala Ala Cys Cys Cys Thr Ala Gly  
 725 730 735  
 Cys Cys Thr Thr Cys Ala Ala Ala Ala Thr Gly Ala Ala Thr Gly Gly  
 740 745 750  
 Thr Thr Ala Cys Ala Thr Ala Thr Cys Cys Ala Ala Thr Gly Cys Ala  
 755 760 765  
 Ala Ala Cys Thr Ala Cys Thr Cys Ala Gly Thr Gly Ala Ala Gly Ala  
 770 775 780  
 Ala Gly Thr Gly Cys Ala Thr Cys Thr Thr Cys Thr Thr Ala Cys Thr  
 785 790 795 800  
 Cys Thr Thr Cys Ala Thr Cys Ala Ala Cys Cys Ala Thr Cys Gly Thr  
 805 810 815  
 Cys Thr Gly Gly Thr Ala Gly Ala Ala Thr Cys Ala Ala Cys Thr Thr  
 820 825 830  
 Cys Cys Thr Thr Gly Ala Gly Ala Ala Ala Ala Gly Cys Cys Ala Thr  
 835 840 845  
 Ala Gly Ala Ala Ala Cys Ala Gly Thr Gly Thr Ala Thr Gly Cys Ala  
 850 855 860  
 Gly Cys Cys Thr Ala Thr Thr Thr Gly Cys Cys Cys Ala Ala Ala Ala  
 865 870 875 880

Ala Cys Ala Cys Ala Cys Ala Cys Cys Cys Ala Thr Thr Cys Cys Thr  
885 890 895

Gly Thr Ala Cys Cys Thr Cys Ala Gly Thr Thr Thr Ala Gly Ala Ala  
900 905 910

Ala Thr Cys Ala Gly Thr Cys Cys Cys Cys Ala Gly Ala Ala Thr Gly  
915 920 925

Thr Gly Gly Ala Thr Gly Thr Thr Ala Ala Thr Gly Thr Gly Cys Ala  
930 935 940

Cys Cys Cys Cys Ala Cys Ala Ala Ala Gly Cys Ala Thr Gly Ala Ala  
945 950 955 960

Gly Thr Thr Cys Ala Cys Thr Thr Cys Cys Thr Gly Cys Ala Cys Gly  
965 970 975

Ala Gly Gly Ala Gly Ala Gly Cys Ala Thr Cys Cys Thr Gly Gly Ala  
980 985 990

Gly Cys Gly Gly Gly Thr Gly Cys Ala Gly Cys Ala Gly Cys Ala Cys  
995 1000 1005

Ala Thr Cys Gly Ala Gly Ala Gly Cys Ala Ala Gly Cys Thr Cys  
1010 1015 1020

Cys Thr Gly Gly Gly Cys Thr Cys Cys Ala Ala Thr Thr Cys Cys  
1025 1030 1035

Thr Cys Cys Ala Gly Gly Ala Thr Gly Thr Ala Cys Thr Thr Cys  
1040 1045 1050

Ala Cys Cys Cys Ala Gly Ala Cys Thr Thr Thr Gly Cys Thr Ala  
1055 1060 1065

Cys Cys Ala Gly Gly Ala Cys Thr Thr Gly Cys Thr Gly Gly Cys  
1070 1075 1080

Cys Cys Cys Thr Cys Thr Gly Gly Gly Gly Ala Gly Ala Thr Gly  
1085 1090 1095

Gly Thr Thr Ala Ala Ala Thr Cys Cys Ala Cys Ala Ala Cys Ala  
1100 1105 1110

Ala Gly Thr Cys Thr Gly Ala Cys Cys Thr Cys Gly Thr Cys Thr  
1115 1120 1125

Thr Cys Thr Ala Cys Thr Thr Cys Thr Gly Gly Ala Ala Gly Thr  
1130 1135 1140

Ala Gly Thr Gly Ala Thr Ala Ala Gly Gly Thr Cys Thr Ala Thr  
1145 1150 1155

Gly Cys Cys Cys Ala Cys Cys Ala Gly Ala Thr Gly Gly Thr Thr  
 1160 1165 1170  
 Cys Gly Thr Ala Cys Ala Gly Ala Thr Thr Cys Cys Cys Gly Gly  
 1175 1180 1185  
 Gly Ala Ala Cys Ala Gly Ala Ala Gly Cys Thr Thr Gly Ala Thr  
 1190 1195 1200  
 Gly Cys Ala Thr Thr Thr Cys Thr Gly Cys Ala Gly Cys Cys Thr  
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 Cys Thr Gly Ala Gly Cys Ala Ala Ala Cys Cys Cys Cys Thr Gly  
 1220 1225 1230  
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 1235 1240 1245  
 Gly Cys Cys Ala Thr Thr Gly Thr Cys Ala Cys Ala Gly Ala Gly  
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 1265 1270 1275  
 Thr Cys Thr Ala Gly Thr Gly Gly Cys Ala Gly Gly Gly Cys Thr  
 1280 1285 1290  
 Ala Gly Gly Cys Ala Gly Cys Ala Ala Gly Ala Thr Gly Ala Gly  
 1295 1300 1305  
 Gly Ala Gly Ala Thr Gly Cys Thr Thr Gly Ala Ala Cys Thr Cys  
 1310 1315 1320  
 Cys Cys Ala Gly Cys Cys Cys Cys Thr Gly Cys Thr Gly Ala Ala  
 1325 1330 1335  
 Gly Thr Gly Gly Cys Thr Gly Cys Cys Ala Ala Ala Ala Ala Thr  
 1340 1345 1350  
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 1355 1360 1365  
 Gly Ala Thr Ala Cys Ala Ala Cys Ala Ala Ala Gly Gly Gly Gly  
 1370 1375 1380  
 Ala Cys Thr Thr Cys Ala Gly Ala Ala Ala Thr Gly Thr Cys Ala  
 1385 1390 1395  
 Gly Ala Gly Ala Ala Gly Ala Gly Ala Gly Gly Ala Cys Cys Thr  
 1400 1405 1410

Ala Cys Thr Thr Cys Cys Ala Gly Cys Ala Ala Cys Cys Cys Cys	1415	1420	1425
Ala Gly Ala Ala Ala Gly Ala Gly Ala Cys Ala Thr Cys Gly Gly	1430	1435	1440
Gly Ala Ala Gly Ala Thr Thr Cys Thr Gly Ala Thr Gly Thr Gly	1445	1450	1455
Gly Ala Ala Ala Thr Gly Gly Thr Gly Gly Ala Ala Gly Ala Thr	1460	1465	1470
Gly Ala Thr Thr Cys Cys Cys Gly Ala Ala Ala Gly Gly Ala Ala	1475	1480	1485
Ala Thr Gly Ala Cys Thr Gly Cys Ala Gly Cys Thr Thr Gly Thr	1490	1495	1500
Ala Cys Cys Cys Cys Cys Gly Gly Ala Gly Ala Ala Gly Gly	1505	1510	1515
Ala Thr Cys Ala Thr Thr Ala Ala Cys Cys Thr Cys Ala Cys Thr	1520	1525	1530
Ala Gly Thr Gly Thr Thr Thr Thr Gly Ala Gly Thr Cys Thr Cys	1535	1540	1545
Cys Ala Gly Gly Ala Ala Gly Ala Ala Ala Thr Thr Ala Ala Thr	1550	1555	1560
Gly Ala Gly Cys Ala Gly Gly Gly Ala Cys Ala Thr Gly Ala Gly	1565	1570	1575
Gly Thr Thr Cys Thr Cys Cys Gly Gly Gly Ala Gly Ala Thr Gly	1580	1585	1590
Thr Thr Gly Cys Ala Thr Ala Ala Cys Cys Ala Cys Thr Cys Cys	1595	1600	1605
Thr Thr Cys Gly Thr Gly Gly Gly Cys Thr Gly Thr Gly Thr Gly	1610	1615	1620
Ala Ala Thr Cys Cys Thr Cys Ala Gly Thr Gly Gly Gly Cys Cys	1625	1630	1635
Thr Thr Gly Gly Cys Ala Cys Ala Gly Cys Ala Thr Cys Ala Ala	1640	1645	1650
Ala Cys Cys Ala Ala Gly Thr Thr Ala Thr Ala Cys Cys Thr Thr	1655	1660	1665
Cys Thr Cys Ala Ala Cys Ala Cys Cys Ala Cys Cys Ala Ala Gly	1670	1675	1680

Cys Thr Thr Ala Gly Thr Gly Ala Ala Gly Ala Ala Cys Thr Gly  
 1685 1690 1695  
 Thr Thr Cys Thr Ala Cys Cys Ala Gly Ala Thr Ala Cys Thr Cys  
 1700 1705 1710  
 Ala Thr Thr Thr Ala Thr Gly Ala Thr Thr Thr Thr Gly Cys Cys  
 1715 1720 1725  
 Ala Ala Thr Thr Thr Thr Gly Gly Thr Gly Thr Thr Cys Thr Cys  
 1730 1735 1740  
 Ala Gly Gly Thr Thr Ala Thr Cys Gly Gly Ala Gly Cys Cys Ala  
 1745 1750 1755  
 Gly Cys Ala Cys Cys Gly Cys Thr Cys Thr Thr Thr Gly Ala Cys  
 1760 1765 1770  
 Cys Thr Thr Gly Cys Cys Ala Thr Gly Cys Thr Thr Gly Cys Cys  
 1775 1780 1785  
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 1790 1795 1800  
 Ala Gly Thr Gly Gly Cys Thr Gly Gly Ala Cys Ala Gly Ala Gly  
 1805 1810 1815  
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 1820 1825 1830  
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 1835 1840 1845  
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 1850 1855 1860  
 Cys Thr Gly Ala Ala Gly Ala Ala Gly Ala Ala Gly Gly Cys Thr  
 1865 1870 1875  
 Gly Ala Gly Ala Thr Gly Cys Thr Thr Gly Cys Ala Gly Ala Cys  
 1880 1885 1890  
 Thr Ala Thr Thr Thr Cys Thr Cys Thr Thr Thr Gly Gly Ala Ala  
 1895 1900 1905  
 Ala Thr Thr Gly Ala Thr Gly Ala Gly Gly Ala Ala Gly Gly Gly  
 1910 1915 1920  
 Ala Ala Cys Cys Thr Gly Ala Thr Thr Gly Gly Ala Thr Thr Ala  
 1925 1930 1935



Cys	Cys	Cys	Cys	Thr	Thr	Cys	Thr	Gly	Ala	Thr	Thr	Gly	Ala	Cys
1940						1945						1950		
Ala	Ala	Cys	Thr	Ala	Thr	Gly	Thr	Gly	Cys	Cys	Cys	Cys	Cys	Thr
1955						1960						1965		
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1970						1975					1980			
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2075						2080					2085			
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Ser Ile Asp Ala Glu Ala Lys Cys Val Ala Val Arg Val Asn Met Glu  
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Thr Phe Gln Val Gln Val Ile Asp Asn Gly Phe Gly Met Gly Ser Asp  
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Asp Val Glu Lys Val Gly Asn Arg Tyr Phe Thr Ser Lys Cys His Ser  
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## MOR0251.ST25.txt

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Thr Val Thr Val Tyr Asn Leu Phe Tyr Gln Leu Pro Val Arg Arg Lys  
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Cys Met Asp Pro Arg Leu Glu Phe Glu Lys Val Arg Gln Arg Ile Glu  
 165 170 175

Ala Leu Ser Leu Met His Pro Ser Ile Ser Phe Ser Leu Arg Asn Asp  
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Val Ser Gly Ser Met Val Leu Gln Leu Pro Lys Thr Lys Asp Val Cys  
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Ser Arg Phe Cys Gln Ile Tyr Gly Leu Gly Lys Ser Gln Lys Leu Arg  
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Glu Ile Ser Phe Lys Tyr Lys Glu Phe Glu Leu Ser Gly Tyr Ile Ser  
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Ser Glu Ala His Tyr Asn Lys Asn Met Gln Phe Leu Phe Val Asn Lys  
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Arg Leu Val Leu Arg Thr Lys Leu His Lys Leu Ile Asp Phe Leu Leu  
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Arg Lys Glu Ser Ile Ile Cys Lys Pro Lys Asn Gly Pro Thr Ser Arg  
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Ile Tyr Val Ile Asn Val Gln Cys Gln Phe Cys Glu Tyr Asp Val Cys  
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Met Glu Pro Ala Lys Thr Leu Ile Glu Phe Gln Asn Trp Asp Thr Leu  
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Leu Phe Cys Ile Gln Glu Gly Val Lys Met Phe Leu Lys Gln Glu Lys  
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Leu Phe Val Glu Leu Ser Gly Glu Asp Ile Lys Glu Phe Ser Glu Asp  
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 Tyr Glu Met Phe Asn Leu Gln Ser Lys Ala Val Lys Arg Lys Thr Thr  
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 Ala Glu Asn Val Asn Thr Gln Ser Ser Arg Asp Ser Glu Ala Thr Arg  
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 Gly His Ser Lys Met Thr Glu Pro Ser Leu Gln Asn Lys Asp Ser Ser  
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 Cys Ser Glu Ser Lys Met Leu Glu Gln Glu Thr Ile Val Ala Ser Glu  
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## MOR0251.ST25.txt

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Gln Thr Asp Cys Ile Leu Ser Asp Thr Ser Pro Ser Phe Pro Trp Tyr  
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Arg His Val Ser Asn Asp Ser Arg Lys Thr Asp Lys Leu Ile Gly Phe  
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Ser Lys Pro Ile Val Arg Lys Lys Leu Ser Leu Ser Ser Gln Leu Gly  
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Ser Val Leu Thr Gln Asp Phe Cys Met Leu Phe Asn Asn Lys His Glu  
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Cys Gln Pro Phe Arg Ser Asp Leu Val Leu Pro Phe Leu Pro Arg
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Lys Val Pro Leu Cys Phe Val Glu Arg Glu Ala Asn Glu Leu Arg  
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aatgtgtttt acccgaggga gagactgctg gagacatggg gaaactgaga cagataattc	720
aaagaggagg aattctgatc acagaaagaa aaaaagctga cttttccaca aaagacattt	780
atcaggacct caaccggttg ttgaaaggca aaaagggaga gcagatgaat agtgcgtgat	840
tgccagaaat ggagaatcag gttgcagttt catcactgtc tgcggtaatc aagttttttag	900
aactcttata agatgattcc aactttggac agtttgaact gactactttt gacttcagcc	960
agtatatgaa attggatatt gcagcagtc gagcccttaa cttttttcag ggttctgttg	1020
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aagatttact tcgtcgattc ccagatctta accgacttgc caagaagttt caaagacaag	1260
cagcaaactt acaagattgt taccgactct atcaggggat aaatcaacta cctaattgta	1320
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tgtagctca gctagatgct gttgtcagct ttgctcacgt gtcaaagga gcacctgttc	1920
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ggcatgcttg tgttgaagtt caagatgaaa ttgcatttat tcctaataac gtatactttg	2040
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## MOR0251.ST25.txt

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 agcatgtaat agagtgtgct aaacagaaag ccctggaact tgaggagttt cagtatatgt 2640  
 gagaatcgca aggatatgat atcatggaac cagcagcaaa gaagtgtctat ctggaaagag 2700  
 agcaagggtg aaaaattatt caggagttcc tgtccaaggt gaaacaaatg ccctttactg 2760  
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 atatttagta atattttact ttgaggacat tttcaaagat ttttattttg aaaaatgaga 3060  
 gctgtaactg aggactgttt gcaattgaca taggcaataa taagtgatgt gctgaatttt 3120  
 ataaataaaa tcatgtagtt tgtgg 3145

&lt;210&gt; 16

&lt;211&gt; 934

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 16

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Val Gly Phe Val Arg Phe Phe Gln Gly Met Pro Glu Lys Pro Thr Thr  
 20 25 30

Thr Val Arg Leu Phe Asp Arg Gly Asp Phe Tyr Thr Ala His Gly Glu  
 35 40 45

Asp Ala Leu Leu Ala Ala Arg Glu Val Phe Lys Thr Gln Gly Val Ile  
 50 55 60

Lys Tyr Met Gly Pro Ala Gly Ala Lys Asn Leu Gln Ser Val Val Leu  
 65 70 75 80

Ser Lys Met Asn Phe Glu Ser Phe Val Lys Asp Leu Leu Leu Val Arg  
 85 90 95

Gln Tyr Arg Val Glu Val Tyr Lys Asn Arg Ala Gly Asn Lys Ala Ser  
 100 105 110

Lys Glu Asn Asp Trp Tyr Leu Ala Tyr Lys Ala Ser Pro Gly Asn Leu  
 115 120 125  
 Ser Gln Phe Glu Asp Ile Leu Phe Gly Asn Asn Asp Met Ser Ala Ser  
 130 135 140  
 Ile Gly Val Val Gly Val Lys Met Ser Ala Val Asp Gly Gln Arg Gln  
 145 150 155 160  
 Val Gly Val Gly Tyr Val Asp Ser Ile Gln Arg Lys Leu Gly Leu Cys  
 165 170 175  
 Glu Phe Pro Asp Asn Asp Gln Phe Ser Asn Leu Glu Ala Leu Leu Ile  
 180 185 190  
 Gln Ile Gly Pro Lys Glu Cys Val Leu Pro Gly Gly Glu Thr Ala Gly  
 195 200 205  
 Asp Met Gly Lys Leu Arg Gln Ile Ile Gln Arg Gly Gly Ile Leu Ile  
 210 215 220  
 Thr Glu Arg Lys Lys Ala Asp Phe Ser Thr Lys Asp Ile Tyr Gln Asp  
 225 230 235 240  
 Leu Asn Arg Leu Leu Lys Gly Lys Lys Gly Glu Gln Met Asn Ser Ala  
 245 250 255  
 Val Leu Pro Glu Met Glu Asn Gln Val Ala Val Ser Ser Leu Ser Ala  
 260 265 270  
 Val Ile Lys Phe Leu Glu Leu Leu Ser Asp Asp Ser Asn Phe Gly Gln  
 275 280 285  
 Phe Glu Leu Thr Thr Phe Asp Phe Ser Gln Tyr Met Lys Leu Asp Ile  
 290 295 300  
 Ala Ala Val Arg Ala Leu Asn Leu Phe Gln Gly Ser Val Glu Asp Thr  
 305 310 315 320  
 Thr Gly Ser Gln Ser Leu Ala Ala Leu Leu Asn Lys Cys Lys Thr Pro  
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 Gln Gly Gln Arg Leu Val Asn Gln Trp Ile Lys Gln Pro Leu Met Asp  
 340 345 350  
 Lys Asn Arg Ile Glu Glu Arg Leu Asn Leu Val Glu Ala Phe Val Glu  
 355 360 365  
 Asp Ala Glu Leu Arg Gln Thr Leu Gln Glu Asp Leu Leu Arg Arg Phe  
 370 375 380

## MOR0251.ST25.txt

Pro Asp Leu Asn Arg Leu Ala Lys Lys Phe Gln Arg Gln Ala Ala Asn  
 385 390 395 400

Leu Gln Asp Cys Tyr Arg Leu Tyr Gln Gly Ile Asn Gln Leu Pro Asn  
 405 410 415

Val Ile Gln Ala Leu Glu Lys His Glu Gly Lys His Gln Lys Leu Leu  
 420 425 430

Leu Ala Val Phe Val Thr Pro Leu Thr Asp Leu Arg Ser Asp Phe Ser  
 435 440 445

Lys Phe Gln Glu Met Ile Glu Thr Thr Leu Asp Met Asp Gln Val Glu  
 450 455 460

Asn His Glu Phe Leu Val Lys Pro Ser Phe Asp Pro Asn Leu Ser Glu  
 465 470 475 480

Leu Arg Glu Ile Met Asn Asp Leu Glu Lys Lys Met Gln Ser Thr Leu  
 485 490 495

Ile Ser Ala Ala Arg Asp Leu Gly Leu Asp Pro Gly Lys Gln Ile Lys  
 500 505 510

Leu Asp Ser Ser Ala Gln Phe Gly Tyr Tyr Phe Arg Val Thr Cys Lys  
 515 520 525

Glu Glu Lys Val Leu Arg Asn Asn Lys Asn Phe Ser Thr Val Asp Ile  
 530 535 540

Gln Lys Asn Gly Val Lys Phe Thr Asn Ser Lys Leu Thr Ser Leu Asn  
 545 550 555 560

Glu Glu Tyr Thr Lys Asn Lys Thr Glu Tyr Glu Glu Ala Gln Asp Ala  
 565 570 575

Ile Val Lys Glu Ile Val Asn Ile Ser Ser Gly Tyr Val Glu Pro Met  
 580 585 590

Gln Thr Leu Asn Asp Val Leu Ala Gln Leu Asp Ala Val Val Ser Phe  
 595 600 605

Ala His Val Ser Asn Gly Ala Pro Val Pro Tyr Val Arg Pro Ala Ile  
 610 615 620

Leu Glu Lys Gly Gln Gly Arg Ile Ile Leu Lys Ala Ser Arg His Ala  
 625 630 635 640

Cys Val Glu Val Gln Asp Glu Ile Ala Phe Ile Pro Asn Asp Val Tyr  
 645 650 655

Phe Glu Lys Asp Lys Gln Met Phe His Ile Ile Thr Gly Pro Asn Met  
 660 665 670

Gly Gly Lys Ser Thr Tyr Ile Arg Gln Thr Gly Val Ile Val Leu Met  
 675 680 685  
 Ala Gln Ile Gly Cys Phe Val Pro Cys Glu Ser Ala Glu Val Ser Ile  
 690 695 700  
 Val Asp Cys Ile Leu Ala Arg Val Gly Ala Gly Asp Ser Gln Leu Lys  
 705 710 715 720  
 Gly Val Ser Thr Phe Met Ala Glu Met Leu Glu Thr Ala Ser Ile Leu  
 725 730 735  
 Arg Ser Ala Thr Lys Asp Ser Leu Ile Ile Ile Asp Glu Leu Gly Arg  
 740 745 750  
 Gly Thr Ser Thr Tyr Asp Gly Phe Gly Leu Ala Trp Ala Ile Ser Glu  
 755 760 765  
 Tyr Ile Ala Thr Lys Ile Gly Ala Phe Cys Met Phe Ala Thr His Phe  
 770 775 780  
 His Glu Leu Thr Ala Leu Ala Asn Gln Ile Pro Thr Val Asn Asn Leu  
 785 790 795 800  
 His Val Thr Ala Leu Thr Thr Glu Glu Thr Leu Thr Met Leu Tyr Gln  
 805 810 815  
 Val Lys Lys Gly Val Cys Asp Gln Ser Phe Gly Ile His Val Ala Glu  
 820 825 830  
 Leu Ala Asn Phe Pro Lys His Val Ile Glu Cys Ala Lys Gln Lys Ala  
 835 840 845  
 Leu Glu Leu Glu Glu Phe Gln Tyr Ile Gly Glu Ser Gln Gly Tyr Asp  
 850 855 860  
 Ile Met Glu Pro Ala Ala Lys Lys Cys Tyr Leu Glu Arg Glu Gln Gly  
 865 870 875 880  
 Glu Lys Ile Ile Gln Glu Phe Leu Ser Lys Val Lys Gln Met Pro Phe  
 885 890 895  
 Thr Glu Met Ser Glu Glu Asn Ile Thr Ile Lys Leu Lys Gln Leu Lys  
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 Arg Ile Lys Val Thr Thr  
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 <212> DNA  
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 atcatcaa atcaagtcag aaaatttaca gaaaactgct tccaaatcag ctaacaaacg 660  
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 gattgcagcc cgagagctca atattttattg ccatttagat cacaacttta tgacagcaag 840  
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## MOR0251.ST25.txt

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## MOR0251.ST25.txt

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 taataaatat ttaatgaata cttgctataa aaaaaaaaaa aaaaaaaaaa aaaa 4374

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 <212> PRT  
 <213> Homo sapiens

<400> 18

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35 40 45

Pro Gly Ala Ala Ala Ala Ala Ala Pro Pro Ala Pro Ala Phe Pro Pro  
50 55 60

Gln Leu Pro Pro His Val Ala Thr Glu Ile Asp Arg Arg Lys Lys Arg  
65 70 75 80

Pro Leu Glu Asn Asp Gly Pro Val Lys Lys Lys Val Lys Lys Val Gln  
85 90 95

Gln Lys Glu Gly Gly Ser Asp Leu Gly Met Ser Gly Asn Ser Glu Pro  
100 105 110

Lys Lys Cys Leu Arg Thr Arg Asn Val Ser Lys Ser Leu Glu Lys Leu  
115 120 125

Lys Glu Phe Cys Cys Asp Ser Ala Leu Pro Gln Ser Arg Val Gln Thr  
130 135 140

Glu Ser Leu Gln Glu Arg Phe Ala Val Leu Pro Lys Cys Thr Asp Phe  
145 150 155 160

Asp Asp Ile Ser Leu Leu His Ala Lys Asn Ala Val Ser Ser Glu Asp  
165 170 175

Ser Lys Arg Gln Ile Asn Gln Lys Asp Thr Thr Leu Phe Asp Leu Ser  
180 185 190

Gln Phe Gly Ser Ser Asn Thr Ser His Glu Asn Leu Gln Lys Thr Ala  
195 200 205

Ser Lys Ser Ala Asn Lys Arg Ser Lys Ser Ile Tyr Thr Pro Leu Glu  
 210 215 220  
 Leu Gln Tyr Ile Glu Met Lys Gln Gln His Lys Asp Ala Val Leu Cys  
 225 230 235 240  
 Val Glu Cys Gly Tyr Lys Tyr Arg Phe Phe Gly Glu Asp Ala Glu Ile  
 245 250 255  
 Ala Ala Arg Glu Leu Asn Ile Tyr Cys His Leu Asp His Asn Phe Met  
 260 265 270  
 Thr Ala Ser Ile Pro Thr His Arg Leu Phe Val His Val Arg Arg Leu  
 275 280 285  
 Val Ala Lys Gly Tyr Lys Val Gly Val Val Lys Gln Thr Glu Thr Ala  
 290 295 300  
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 305 310 315 320  
 Leu Thr Ala Leu Tyr Thr Lys Ser Thr Leu Ile Gly Glu Asp Val Asn  
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 Pro Leu Ile Lys Leu Asp Asp Ala Val Asn Val Asp Glu Ile Met Thr  
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 Asp Thr Ser Thr Ser Tyr Leu Leu Cys Ile Ser Glu Asn Lys Glu Asn  
 355 360 365  
 Val Arg Asp Lys Lys Lys Gly Asn Ile Phe Ile Gly Ile Val Gly Val  
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 Gln Pro Ala Thr Gly Glu Val Val Phe Asp Ser Phe Gln Asp Ser Ala  
 385 390 395 400  
 Ser Arg Ser Glu Leu Glu Thr Arg Met Ser Ser Leu Gln Pro Val Glu  
 405 410 415  
 Leu Leu Leu Pro Ser Ala Leu Ser Glu Gln Thr Glu Ala Leu Ile His  
 420 425 430  
 Arg Ala Thr Ser Val Ser Val Gln Asp Asp Arg Ile Arg Val Glu Arg  
 435 440 445  
 Met Asp Asn Ile Tyr Phe Glu Tyr Ser His Ala Phe Gln Ala Val Thr  
 450 455 460  
 Glu Phe Tyr Ala Lys Asp Thr Val Asp Ile Lys Gly Ser Gln Ile Ile  
 465 470 475 480

Ser Gly Ile Val Asn Leu Glu Lys Pro Val Ile Cys Ser Leu Ala Ala  
 485 490 495

Ile Ile Lys Tyr Leu Lys Glu Phe Asn Leu Glu Lys Met Leu Ser Lys  
 500 505 510

Pro Glu Asn Phe Lys Gln Leu Ser Ser Lys Met Glu Phe Met Thr Ile  
 515 520 525

Asn Gly Thr Thr Leu Arg Asn Leu Glu Ile Leu Gln Asn Gln Thr Asp  
 530 535 540

Met Lys Thr Lys Gly Ser Leu Leu Trp Val Leu Asp His Thr Lys Thr  
 545 550 555 560

Ser Phe Gly Arg Arg Lys Leu Lys Lys Trp Val Thr Gln Pro Leu Leu  
 565 570 575

Lys Leu Arg Glu Ile Asn Ala Arg Leu Asp Ala Val Ser Glu Val Leu  
 580 585 590

His Ser Glu Ser Ser Val Phe Gly Gln Ile Glu Asn His Leu Arg Lys  
 595 600 605

Leu Pro Asp Ile Glu Arg Gly Leu Cys Ser Ile Tyr His Lys Lys Cys  
 610 615 620

Ser Thr Gln Glu Phe Phe Leu Ile Val Lys Thr Leu Tyr His Leu Lys  
 625 630 635 640

Ser Glu Phe Gln Ala Ile Ile Pro Ala Val Asn Ser His Ile Gln Ser  
 645 650 655

Asp Leu Leu Arg Thr Val Ile Leu Glu Ile Pro Glu Leu Leu Ser Pro  
 660 665 670

Val Glu His Tyr Leu Lys Ile Leu Asn Glu Gln Ala Ala Lys Val Gly  
 675 680 685

Asp Lys Thr Glu Leu Phe Lys Asp Leu Ser Asp Phe Pro Leu Ile Lys  
 690 695 700

Lys Arg Lys Asp Glu Ile Gln Gly Val Ile Asp Glu Ile Arg Met His  
 705 710 715 720

Leu Gln Glu Ile Arg Lys Ile Leu Lys Asn Pro Ser Ala Gln Tyr Val  
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Thr Val Ser Gly Gln Glu Phe Met Ile Glu Ile Lys Asn Ser Ala Val  
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Ser Cys Ile Pro Thr Asp Trp Val Lys Val Gly Ser Thr Lys Ala Val  
 755 760 765

Ser Arg Phe His Ser Pro Phe Ile Val Glu Asn Tyr Arg His Leu Asn  
 770 775 780

Gln Leu Arg Glu Gln Leu Val Leu Asp Cys Ser Ala Glu Trp Leu Asp  
 785 790 795 800

Phe Leu Glu Lys Phe Ser Glu His Tyr His Ser Leu Cys Lys Ala Val  
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His His Leu Ala Thr Val Asp Cys Ile Phe Ser Leu Ala Lys Val Ala  
 820 825 830

Lys Gln Gly Asp Tyr Cys Arg Pro Thr Val Gln Glu Glu Arg Lys Ile  
 835 840 845

Val Ile Lys Asn Gly Arg His Pro Val Ile Asp Val Leu Leu Gly Glu  
 850 855 860

Gln Asp Gln Tyr Val Pro Asn Asn Thr Asp Leu Ser Glu Asp Ser Glu  
 865 870 875 880

Arg Val Met Ile Ile Thr Gly Pro Asn Met Gly Gly Lys Ser Ser Tyr  
 885 890 895

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Val Pro Ala Glu Glu Ala Thr Ile Gly Ile Val Asp Gly Ile Phe Thr  
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 930 935 940

Glu Glu Leu Thr Asp Thr Ala Glu Ile Ile Arg Lys Ala Thr Ser Gln  
 945 950 955 960

Ser Leu Val Ile Leu Asp Glu Leu Gly Arg Gly Thr Ser Thr His Asp  
 965 970 975

Gly Ile Ala Ile Ala Tyr Ala Thr Leu Glu Tyr Phe Ile Arg Asp Val  
 980 985 990

Lys Ser Leu Thr Leu Phe Val Thr His Tyr Pro Pro Val Cys Glu Leu  
 995 1000 1005

Glu Lys Asn Tyr Ser His Gln Val Gly Asn Tyr His Met Gly Phe  
 1010 1015 1020

Leu Val Ser Glu Asp Glu Ser Lys Leu Asp Pro Gly Ala Ala Glu  
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## MOR0251.ST25.txt

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Ile Ala Ala Arg Ser Tyr Gly Leu Asn Val Ala Lys Leu Ala Asp  
1055 1060 1065

Val Pro Gly Glu Ile Leu Lys Lys Ala Ala His Lys Ser Lys Glu  
1070 1075 1080

Leu Glu Gly Leu Ile Asn Thr Lys Arg Lys Arg Leu Lys Tyr Phe  
1085 1090 1095

Ala Lys Leu Trp Thr Met His Asn Ala Gln Asp Leu Gln Lys Trp  
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## MOR0251.ST25.txt

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 <212> PRT  
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Phe Gly Leu Gln Glu Thr Pro Gln Ser Arg Pro Ser Val Gln Val Val  
 35 40 45

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 50 55 60

Ser Ser Ser Ser Ser Leu Pro Cys Pro Ala Pro Asn Ser Arg Pro Ala  
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Gln Gly Ser Tyr Phe Gly Asn Lys Arg Ala Tyr Ala Glu Asn Thr Val  
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Ala Ser Asn Phe Thr Phe Gly Ala Ser Ser Ser Ser Ala Arg Asp Thr  
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Asn Tyr Pro Gln Thr Leu Lys Thr Pro Leu Ser Thr Gly Asn Pro Gln  
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Arg Ser Gly Tyr Lys Ser Trp Thr Pro Gln Val Gly Tyr Ser Ala Ser  
 130 135 140

Ser Ser Ser Ala Ile Ser Ala His Ser Pro Ser Val Ile Val Ala Val  
 145 150 155 160

Val Glu Gly Arg Gly Leu Ala Arg Gly Glu Ile Gly Met Ala Ser Ile  
 165 170 175

Asp Leu Lys Asn Pro Gln Ile Ile Leu Ser Gln Phe Ala Asp Asn Thr  
 180 185 190

Thr Tyr Ala Lys Val Ile Thr Lys Leu Lys Ile Leu Ser Pro Leu Glu  
 195 200 205

Ile Ile Met Ser Asn Thr Ala Cys Ala Val Gly Asn Ser Thr Lys Leu  
 210 215 220

Phe Thr Leu Ile Thr Glu Asn Phe Lys Asn Val Asn Phe Thr Thr Ile  
 225 230 235 240

Gln Arg Lys Tyr Phe Asn Glu Thr Lys Gly Leu Glu Tyr Ile Glu Gln  
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Leu Cys Ile Ala Glu Phe Ser Thr Val Leu Met Glu Val Gln Ser Lys  
 260 265 270



Tyr Tyr Cys Leu Ala Ala Val Ala Ala Leu Leu Lys Tyr Val Glu Phe  
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 Ile Gln Asn Ser Val Tyr Ala Pro Lys Ser Leu Lys Ile Cys Phe Gln  
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Ser Lys Val Lys Asn Ser Tyr Ser Phe Thr Ser Ala Asp Leu Ile Lys  
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 Tyr Met Ile Val Cys Lys Leu Leu Ser Glu Ile Tyr Glu His Ile His  
 595 600 605  
 Cys Leu Tyr Lys Leu Ser Asp Thr Val Ser Met Leu Asp Met Leu Leu  
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 Val Lys Asn Thr Ser Arg Asn Lys Glu Ala Ile Leu Tyr Thr Tyr Lys  
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## MOR0251.ST25.txt

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Glu Val Ser Ser Leu Pro Pro Ser Ile Val Leu Asp Ala Lys Glu Ile  
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Thr Thr Gln Ile Thr Arg Gln Ile Leu Gln Asn Gln Arg Ser Thr Pro  
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Glu Met Glu Arg Gln Arg Ala Val Tyr His Leu Ala Thr Arg Leu Val  
 885 890 895

Gln Thr Ala Arg Asn Ser Gln Leu Asp Pro Asp Ser Leu Arg Ile Tyr  
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## MOR0251.ST25.txt

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 Glu Ile His Leu Cys Val Leu Trp Asn Ser Gly Tyr Leu Gly Ile Ala  
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 Tyr Tyr Asp Thr Ser Asp Ser Thr Ile His Phe Met Pro Asp Ala Pro  
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 Asp His Glu Ser Leu Lys Leu Leu Gln Arg Val Leu Asp Glu Ile Asn  
 85 90 95  
 Pro Gln Ser Val Val Thr Ser Ala Lys Gln Asp Glu Asn Met Thr Arg  
 100 105 110  
 Phe Leu Gly Lys Leu Ala Ser Gln Glu His Arg Glu Pro Lys Arg Pro  
 115 120 125  
 Glu Ile Ile Phe Leu Pro Ser Val Asp Phe Gly Leu Glu Ile Ser Lys  
 130 135 140  
 Gln Arg Leu Leu Ser Gly Asn Tyr Ser Phe Ile Pro Asp Ala Met Thr  
 145 150 155 160  
 Ala Thr Glu Lys Ile Leu Phe Leu Ser Ser Ile Ile Pro Phe Asp Cys  
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 Arg Arg Ile Gly Val Glu Leu Glu Asp Tyr Asn Val Ser Val Pro Ile  
 195 200 205  
 Leu Gly Phe Lys Lys Phe Met Leu Thr His Leu Val Asn Ile Asp Gln  
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 Asp Thr Tyr Ser Val Leu Gln Ile Phe Lys Ser Glu Ser His Pro Ser  
 225 230 235 240  
 Val Tyr Lys Val Ala Ser Gly Leu Lys Glu Gly Leu Ser Leu Phe Gly  
 245 250 255  
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 260 265 270  
 Trp Phe Thr Arg Pro Thr His Asp Leu Gly Glu Leu Ser Ser Arg Leu  
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 Asp Val Ile Gln Phe Phe Leu Leu Pro Gln Asn Leu Asp Met Ala Gln  
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Lys Arg Met Lys Leu Ser His Thr Lys Val Ser Asp Trp Gln Val Leu  
 325 330 335

Tyr Lys Thr Val Tyr Ser Ala Leu Gly Leu Arg Asp Ala Cys Arg Ser  
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Leu Pro Gln Ser Ile Gln Leu Phe Arg Asp Ile Ala Gln Glu Phe Ser  
 355 360 365

Asp Asp Leu His His Ile Ala Ser Leu Ile Gly Lys Val Val Asp Phe  
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Glu Gly Ser Leu Ala Glu Asn Arg Phe Thr Val Leu Pro Asn Ile Asp  
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Pro Glu Ile Asp Glu Lys Lys Arg Arg Leu Met Gly Leu Pro Ser Phe  
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Leu Thr Glu Val Ala Arg Lys Glu Leu Glu Asn Leu Asp Ser Arg Ile  
 420 425 430

Pro Ser Cys Ser Val Ile Tyr Ile Pro Leu Ile Gly Phe Leu Leu Ser  
 435 440 445

Ile Pro Arg Leu Pro Ser Met Val Glu Ala Ser Asp Phe Glu Ile Asn  
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Gly Leu Asp Phe Met Phe Leu Ser Glu Glu Lys Leu His Tyr Arg Ser  
 465 470 475 480

Ala Arg Thr Lys Glu Leu Asp Ala Leu Leu Gly Asp Leu His Cys Glu  
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Ile Arg Asp Gln Glu Thr Leu Leu Met Tyr Gln Leu Gln Cys Gln Val  
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Leu Asp Val Leu Leu Ala Leu Ala Ser Ala Ala Arg Asp Tyr Gly Tyr  
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Ser Arg Pro Arg Tyr Ser Pro Gln Val Leu Gly Val Arg Ile Gln Asn  
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Gly Arg His Pro Leu Met Glu Leu Cys Ala Arg Thr Phe Val Pro Asn  
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Ser Thr Glu Cys Gly Gly Asp Lys Gly Arg Val Lys Val Ile Thr Gly  
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Pro Asn Ser Ser Gly Lys Ser Ile Tyr Leu Lys Gln Val Gly Leu Ile  
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Thr Phe Met Ala Leu Val Gly Ser Phe Val Pro Ala Glu Glu Ala Glu  
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660 665 670

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Ala Val Leu Arg His Trp Leu Ala Arg Gly Pro Thr Cys Pro His Ile  
690 695 700

Phe Val Ala Thr Asn Phe Leu Ser Leu Val Gln Leu Gln Leu Leu Pro  
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Gln Gly Pro Leu Val Gln Tyr Leu Thr Met Glu Thr Cys Glu Asp Gly  
725 730 735

Asn Asp Leu Val Phe Phe Tyr Gln Val Cys Glu Gly Val Ala Lys Ala  
740 745 750

Ser His Ala Ser His Thr Ala Ala Gln Ala Gly Leu Pro Asp Lys Leu  
755 760 765

Val Ala Arg Gly Lys Glu Val Ser Asp Leu Ile Arg Ser Gly Lys Pro  
770 775 780

Ile Lys Pro Val Lys Asp Leu Leu Lys Lys Asn Gln Met Glu Asn Cys  
785 790 795 800

Gln Thr Leu Val Asp Lys Phe Met Lys Leu Asp Leu Glu Asp Pro Asn  
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Ala Trp Ser Glu Ala Gly Pro Gly Pro Arg Pro Leu Ala Arg Ser Ala  
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Ser Pro Pro Lys Ala Lys Asn Leu Asn Gly Gly Leu Arg Arg Ser Val  
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Ala Pro Ala Ala Pro Thr Ser Cys Asp Phe Ser Pro Gly Asp Leu Val  
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Trp Ala Lys Met Glu Gly Tyr Pro Trp Trp Pro Cys Leu Val Tyr Asn  
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His Pro Phe Asp Gly Thr Phe Ile Arg Glu Lys Gly Lys Ser Val Arg  
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Val His Val Gln Phe Phe Asp Asp Ser Pro Thr Arg Gly Trp Val Ser  
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Lys Arg Leu Leu Lys Pro Tyr Thr Gly Ser Lys Ser Lys Glu Ala Gln  
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Lys Gly Gly His Phe Tyr Ser Ala Lys Pro Glu Ile Leu Arg Ala Met  
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Gln Arg Ala Asp Glu Ala Leu Asn Lys Asp Lys Ile Lys Arg Leu Glu  
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Leu Ala Val Cys Asp Glu Pro Ser Glu Pro Glu Glu Glu Glu Met  
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Glu Val Gly Thr Thr Tyr Val Thr Asp Lys Ser Glu Glu Asp Asn Glu  
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## MOR0251.ST25.txt

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Gly Ser Ser Asp Glu Ile Ser Ser Gly Val Gly Asp Ser Glu Ser Glu  
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Gly Leu Asn Ser Pro Val Lys Val Ala Arg Lys Arg Lys Arg Met Val  
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Thr Gly Asn Gly Ser Leu Lys Arg Lys Ser Ser Arg Lys Glu Thr Pro  
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Ser Ala Thr Lys Gln Ala Thr Ser Ile Ser Ser Glu Thr Lys Asn Thr  
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Leu Arg Ala Phe Ser Ala Pro Gln Asn Ser Glu Ser Gln Ala His Val  
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Ser Gly Gly Gly Asp Asp Ser Ser Arg Pro Thr Val Trp Tyr His Glu  
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Thr Leu Glu Trp Leu Lys Glu Glu Lys Arg Arg Asp Glu His Arg Arg  
 370 375 380

Arg Pro Asp His Pro Asp Phe Asp Ala Ser Thr Leu Tyr Val Pro Glu  
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Asp Phe Leu Asn Ser Cys Thr Pro Gly Met Arg Lys Trp Trp Gln Ile  
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Lys Ser Gln Asn Phe Asp Leu Val Ile Cys Tyr Lys Val Gly Lys Phe  
 420 425 430

Tyr Glu Leu Tyr His Met Asp Ala Leu Ile Gly Val Ser Glu Leu Gly  
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Leu Val Phe Met Lys Gly Asn Trp Ala His Ser Gly Phe Pro Glu Ile  
 450 455 460

Ala Phe Gly Arg Tyr Ser Asp Ser Leu Val Gln Lys Gly Tyr Lys Val  
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Ala Arg Val Glu Gln Thr Glu Thr Pro Glu Met Met Glu Ala Arg Cys  
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Arg Lys Met Ala His Ile Ser Lys Tyr Asp Arg Val Val Arg Arg Glu  
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Ile Cys Arg Ile Ile Thr Lys Gly Thr Gln Thr Tyr Ser Val Leu Glu  
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 740 745 750  
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 755 760 765  
 Phe Gly Lys Arg Leu Leu Lys Gln Trp Leu Cys Ala Pro Leu Cys Asn  
 770 775 780

His Tyr Ala Ile Asn Asp Arg Leu Asp Ala Ile Glu Asp Leu Met Val  
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Val Pro Asp Lys Ile Ser Glu Val Val Glu Leu Leu Lys Lys Leu Pro  
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Asp Leu Glu Arg Leu Leu Ser Lys Ile His Asn Val Gly Ser Pro Leu  
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Lys Ser Gln Asn His Pro Asp Ser Arg Ala Ile Met Tyr Glu Glu Thr  
 835 840 845

Thr Tyr Ser Lys Lys Lys Ile Ile Asp Phe Leu Ser Ala Leu Glu Gly  
 850 855 860

Phe Lys Val Met Cys Lys Ile Ile Gly Ile Met Glu Glu Val Ala Asp  
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Gly Phe Lys Ser Lys Ile Leu Lys Gln Val Ile Ser Leu Gln Thr Lys  
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Asn Pro Glu Gly Arg Phe Pro Asp Leu Thr Val Glu Leu Asn Arg Trp  
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Asp Thr Ala Phe Asp His Glu Lys Ala Arg Lys Thr Gly Leu Ile Thr  
 915 920 925

Pro Lys Ala Gly Phe Asp Ser Asp Tyr Asp Gln Ala Leu Ala Asp Ile  
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Arg Glu Asn Glu Gln Ser Leu Leu Glu Tyr Leu Glu Lys Gln Arg Asn  
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Arg Ile Gly Cys Arg Thr Ile Val Tyr Trp Gly Ile Gly Arg Asn Arg  
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Tyr Gln Leu Glu Ile Pro Glu Asn Phe Thr Thr Arg Asn Leu Pro Glu  
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Glu Tyr Glu Leu Lys Ser Thr Lys Lys Gly Cys Lys Arg Tyr Trp Thr  
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Lys Thr Ile Glu Lys Lys Leu Ala Asn Leu Ile Asn Ala Glu Glu  
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Arg Arg Asp Val Ser Leu Lys Asp Cys Met Arg Arg Leu Phe Tyr  
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Asn Phe Asp Lys Asn Tyr Lys Asp Trp Gln Ser Ala Val Glu Cys  
 1040 1045 1050

Ile Ala Val Leu Asp Val Leu Leu Cys Leu Ala Asn Tyr Ser Arg  
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Thr	Ala	Thr	Phe	Asp	Gly	Thr	Ala	Ile	Ala	Asn	Ala	Val	Val	Lys
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Glu	Leu	Ala	Glu	Thr	Ile	Lys	Cys	Arg	Thr	Leu	Phe	Ser	Thr	His
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Cys	Pro	Lys	Ser	Tyr	Gly	Phe	Asn	Ala	Ala	Arg	Leu	Ala	Asn	Leu
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## MOR0251.ST25.txt

Glu Lys Met Asn Gln Ser Leu Arg Leu Phe Arg Glu Val Cys Leu  
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Ala Ser Glu Arg Ser Thr Val Asp Ala Glu Ala Val His Lys Leu  
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Gly Pro Glu His Pro Asn Pro Gly Lys Pro Phe Thr Ala Arg Gly Phe  
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Pro Ala Ser Ala Thr Phe Gln Thr Thr Pro Gly Pro Gln Ala Ser Arg  
 65 70 75 80

Gly Phe Gln Asn Pro Glu Thr Leu Ala Asp Ile Pro Ala Ser Pro Gln  
 85 90 95

Leu Leu Thr Asp Gly His Tyr Met Thr Leu Pro Val Ser Pro Asp Gln  
 100 105 110

Leu Pro Cys Asp Asp Pro Met Ala Gly Ser Gly Gly Ala Pro Val Leu  
 115 120 125

Arg Val Gly His Asp His Gly Cys His Gln Gln Pro Arg Ile Cys Asn  
 130 135 140

Ala Pro Leu Pro Gly Pro Gly Pro Tyr Arg Thr Glu Pro Ala Lys Ala  
 145 150 155 160

Ile Lys Pro Ile Asp Arg Lys Ser Val His Gln Ile Cys Ser Gly Pro  
 165 170 175

Val Val Leu Ser Leu Ser Thr Ala Val Lys Glu Leu Val Glu Asn Ser  
 180 185 190

Leu Asp Ala Gly Ala Thr Asn Ile Asp Leu Lys Leu Lys Asp Tyr Gly  
 195 200 205

Met Asp Leu Ile Glu Val Ser Gly Asn Gly Cys Gly Val Glu Glu Glu  
 210 215 220

Asn Phe Glu Gly Leu Met Met Ser Pro Phe Leu Pro Ala Thr Ser Arg  
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 35 40 45

Asp Arg Arg Gly Pro Arg Glu Gln Thr Arg Ala Pro Ala Thr Ala Ala  
 50 55 60

Pro Pro Arg Pro Leu Gly Ser Arg Gly Ala Glu Ala Ala Glu Pro Gln  
 65 70 75 80

Glu Gly Leu Ser Ala Thr Val Ser Ala Cys Phe Gln Glu Gln Gln Glu  
 85 90 95

## MOR0251.ST25.txt

Met Asn Thr Leu Gln Gly Pro Val Ser Phe Lys Asp Val Ala Val Asp  
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Phe Thr Gln Glu Glu Trp Arg Gln Leu Asp Pro Asp Glu Lys Ile Ala  
 115 120 125

Tyr Gly Asp Val Met Leu Glu Asn Tyr Ser His Leu Val Ser Val Gly  
 130 135 140

Tyr Asp Tyr His Gln Ala Lys His His His Gly Val Glu Val Lys Glu  
 145 150 155 160

Val Glu Gln Gly Glu Glu Pro Trp Ile Met Glu Gly Glu Phe Pro Cys  
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Gln His Ser Pro Glu Pro Ala Lys Ala Ile Lys Pro Ile Asp Arg Lys  
 180 185 190

Ser Val His Gln Ile Cys Ser Gly Pro Val Val Leu Ser Leu Ser Thr  
 195 200 205

Ala Val Lys Glu Leu Val Glu Asn Ser Leu Asp Ala Gly Ala Thr Asn  
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Ile Asp Leu Lys Leu Lys Asp Tyr Gly Val Asp Leu Ile Glu Val Ser  
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Phe Ser Ser Glu  
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## MOR0251.ST25.txt

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ctatcagaat	ttgacgagtt	aaatgacgat	gcttccaaag	aaaaaataat	tagtaaaata	2100
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TTTTTgttta	tttcttgagt	gtgattgtgt	ttcatttgaa	agtgtatgcc	ctttccttta	2640
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## MOR0251.ST25.txt

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agaaatgtat attcggattg aaactcttct aatagttctg aagtcacttg gttccgtatt 2760
gttttcgtcc tcttcctcaa gcaacgattc ttgtctaagc ttattcaacg gtaccaaaga 2820
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<210> 30
<211> 769
<212> PRT
<213> Saccharomyces cerevisiae
<400> 30

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Met Ser Leu Arg Ile Lys Ala Leu Asp Ala Ser Val Val Asn Lys Ile
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```

```

Ala Ala Gly Glu Ile Ile Ile Ser Pro Val Asn Ala Leu Lys Glu Met
          20           25           30

```

```

Met Glu Asn Ser Ile Asp Ala Asn Ala Thr Met Ile Asp Ile Leu Val
          35           40           45

```

```

Lys Glu Gly Gly Ile Lys Val Leu Gln Ile Thr Asp Asn Gly Ser Gly
          50           55           60

```

```

Ile Asn Lys Ala Asp Leu Pro Ile Leu Cys Glu Arg Phe Thr Thr Ser
65           70           75           80

```

```

Lys Leu Gln Lys Phe Glu Asp Leu Ser Gln Ile Gln Thr Tyr Gly Phe
          85           90           95

```

```

Arg Gly Glu Ala Leu Ala Ser Ile Ser His Val Ala Arg Val Thr Val
          100          105          110

```

```

Thr Thr Lys Val Lys Glu Asp Arg Cys Ala Trp Arg Val Ser Tyr Ala
          115          120          125

```

```

Glu Gly Lys Met Leu Glu Ser Pro Lys Pro Val Ala Gly Lys Asp Gly
          130          135          140

```

```

Thr Thr Ile Leu Val Glu Asp Leu Phe Phe Asn Ile Pro Ser Arg Leu
145           150           155           160

```

```

Arg Ala Leu Arg Ser His Asn Asp Glu Tyr Ser Lys Ile Leu Asp Val
          165          170          175

```

## MOR0251.ST25.txt

Val Gly Arg Tyr Ala Ile His Ser Lys Asp Ile Gly Phe Ser Cys Lys  
 180 185 190

Lys Phe Gly Asp Ser Asn Tyr Ser Leu Ser Val Lys Pro Ser Tyr Thr  
 195 200 205

Val Gln Asp Arg Ile Arg Thr Val Phe Asn Lys Ser Val Ala Ser Asn  
 210 215 220

Leu Ile Thr Phe His Ile Ser Lys Val Glu Asp Leu Asn Leu Glu Ser  
 225 230 235 240

Val Asp Gly Lys Val Cys Asn Leu Asn Phe Ile Ser Lys Lys Ser Ile  
 245 250 255

Ser Leu Ile Phe Phe Ile Asn Asn Arg Leu Val Thr Cys Asp Leu Leu  
 260 265 270

Arg Arg Ala Leu Asn Ser Val Tyr Ser Asn Tyr Leu Pro Lys Gly Phe  
 275 280 285

Arg Pro Phe Ile Tyr Leu Gly Ile Val Ile Asp Pro Ala Ala Val Asp  
 290 295 300

Val Asn Val His Pro Thr Lys Arg Glu Val Arg Phe Leu Ser Gln Asp  
 305 310 315 320

Glu Ile Ile Glu Lys Ile Ala Asn Gln Leu His Ala Glu Leu Ser Ala  
 325 330 335

Ile Asp Thr Ser Arg Thr Phe Lys Ala Ser Ser Ile Ser Thr Asn Lys  
 340 345 350

Pro Glu Ser Leu Ile Pro Phe Asn Asp Thr Ile Glu Ser Asp Arg Asn  
 355 360 365

Arg Lys Ser Leu Arg Gln Ala Gln Val Val Glu Asn Ser Tyr Thr Thr  
 370 375 380

Ala Asn Ser Gln Leu Arg Lys Ala Lys Arg Gln Glu Asn Lys Leu Val  
 385 390 395 400

Arg Ile Asp Ala Ser Gln Ala Lys Ile Thr Ser Phe Leu Ser Ser Ser  
 405 410 415

Gln Gln Phe Asn Phe Glu Gly Ser Ser Thr Lys Arg Gln Leu Ser Glu  
 420 425 430

Pro Lys Val Thr Asn Val Ser His Ser Gln Glu Ala Glu Lys Leu Thr  
 435 440 445

Leu Asn Glu Ser Glu Gln Pro Arg Asp Ala Asn Thr Ile Asn Asp Asn  
 450 455 460

```

Asp Leu Lys Asp Gln Pro Lys Lys Lys Gln Lys Leu Gly Asp Tyr Lys
465                               475                               480

Val Pro Ser Ile Ala Asp Asp Glu Lys Asn Ala Leu Pro Ile Ser Lys
      |                               485                               490                               495

Asp Gly Tyr Ile Arg Val Pro Lys Glu Arg Val Asn Val Asn Leu Thr
      500                               505                               510

Ser Ile Lys Lys Leu Arg Glu Lys Val Asp Asp Ser Ile His Arg Glu
      515                               520                               525

Leu Thr Asp Ile Phe Ala Asn Leu Asn Tyr Val Gly Val Val Asp Glu
      530                               535                               540

Glu Arg Arg Leu Ala Ala Ile Gln His Asp Leu Lys Leu Phe Leu Ile
545                               550                               555                               560

Asp Tyr Gly Ser Val Cys Tyr Glu Leu Phe Tyr Gln Ile Gly Leu Thr
      565                               570                               575

Asp Phe Ala Asn Phe Gly Lys Ile Asn Leu Gln Ser Thr Asn Val Ser
      580                               585                               590

Asp Asp Ile Val Leu Tyr Asn Leu Leu Ser Glu Phe Asp Glu Leu Asn
      595                               600                               605

Asp Asp Ala Ser Lys Glu Lys Ile Ile Ser Lys Ile Trp Asp Met Ser
610                               615                               620

Ser Met Leu Asn Glu Tyr Tyr Ser Ile Glu Leu Val Asn Asp Gly Leu
625                               630                               635                               640

Asp Asn Asp Leu Lys Ser Val Lys Leu Lys Ser Leu Pro Leu Leu Leu
      645                               650                               655

Lys Gly Tyr Ile Pro Ser Leu Val Lys Leu Pro Phe Phe Ile Tyr Arg
      660                               665                               670

Leu Gly Lys Glu Val Asp Trp Glu Asp Glu Gln Glu Cys Leu Asp Gly
      675                               680                               685

Ile Leu Arg Glu Ile Ala Leu Leu Tyr Ile Pro Asp Met Val Pro Lys
      690                               695                               700

Val Asp Thr Leu Asp Ala Ser Leu Ser Glu Asp Glu Lys Ala Gln Phe
705                               710                               715                               720

Ile Asn Arg Lys Glu His Ile Ser Ser Leu Leu Glu His Val Leu Phe
      725                               730                               735

```

Pro Cys Ile Lys Arg Arg Phe Leu Ala Pro Arg His Ile Leu Lys Asp  
 740 745 750

Val Val Glu Ile Ala Asn Leu Pro Asp Leu Tyr Lys Val Phe Glu Arg  
 755 760 765

Cys

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 <211> 3056  
 <212> DNA  
 <213> Mus musculus

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 gtcttttccc gagagcggca ccgcaactct cccgcggtga ctgtgactgg aggagtcctg 180  
 catccatgga gcaaaccgaa ggcgtgagta cagaatgtgc taaggccatc aagcctattg 240  
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 aagactatgg ggtggacctc attgaagttt cagacaatgg atgtggggta gaagaagaaa 420  
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 cgcaggttga aactttcggc ttctgggggg aagctctgag ctctctgtgt gactaagtg 540  
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## MOR0251.ST25.txt

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<210> 32  
 <211> 859  
 <212> PRT  
 <213> Mus musculus

<400> 32

Met Glu Gln Thr Glu Gly Val Ser Thr Glu Cys Ala Lys Ala Ile Lys  
 1 5 10 15

Pro Ile Asp Gly Lys Ser Val His Gln Ile Cys Ser Gly Gln Val Ile  
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Leu Ser Leu Ser Thr Ala Val Lys Glu Leu Ile Glu Asn Ser Val Asp  
 35 40 45



## MOR0251.ST25.txt

Ala Gly Ala Thr Thr Ile Asp Leu Arg Leu Lys Asp Tyr Gly Val Asp  
 50 55 60

Leu Ile Glu Val Ser Asp Asn Gly Cys Gly Val Glu Glu Glu Asn Phe  
 65 70 75 80

Glu Gly Leu Ala Leu Lys His His Thr Ser Lys Ile Gln Glu Phe Ala  
 85 90 95

Asp Leu Thr Gln Val Glu Thr Phe Gly Phe Arg Gly Glu Ala Leu Ser  
 100 105 110

Ser Leu Cys Ala Leu Ser Asp Val Thr Ile Ser Thr Cys His Gly Ser  
 115 120 125

Ala Ser Val Gly Thr Arg Leu Val Phe Asp His Asn Gly Lys Ile Thr  
 130 135 140

Gln Lys Thr Pro Tyr Pro Arg Pro Lys Gly Thr Thr Val Ser Val Gln  
 145 150 155 160

His Leu Phe Tyr Thr Leu Pro Val Arg Tyr Lys Glu Phe Gln Arg Asn  
 165 170 175

Ile Lys Lys Glu Tyr Ser Lys Met Val Gln Val Leu Gln Ala Tyr Cys  
 180 185 190

Ile Ile Ser Ala Gly Val Arg Val Ser Cys Thr Asn Gln Leu Gly Gln  
 195 200 205

Gly Lys Arg His Ala Val Val Cys Thr Ser Gly Thr Ser Gly Met Lys  
 210 215 220

Glu Asn Ile Gly Ser Val Phe Gly Gln Lys Gln Leu Gln Ser Leu Ile  
 225 230 235 240

Pro Phe Val Gln Leu Pro Pro Ser Asp Ala Val Cys Glu Glu Tyr Gly  
 245 250 255

Leu Ser Thr Ser Gly Arg His Lys Thr Phe Ser Thr Phe Arg Ala Ser  
 260 265 270

Phe His Ser Ala Arg Thr Ala Pro Gly Gly Val Gln Gln Thr Gly Ser  
 275 280 285

Phe Ser Ser Ser Ile Arg Gly Pro Val Thr Gln Gln Arg Ser Leu Ser  
 290 295 300

Leu Ser Met Arg Phe Tyr His Met Tyr Asn Arg His Gln Tyr Pro Phe  
 305 310 315 320

Val Val Leu Asn Val Ser Val Asp Ser Glu Cys Val Asp Ile Asn Val  
 325 330 335

Thr Pro Asp Lys Arg Gln Ile Leu Leu Gln Glu Glu Lys Leu Leu Leu  
 340 345 350  
 Ala Val Leu Lys Thr Ser Leu Ile Gly Met Phe Asp Ser Asp Ala Asn  
 355 360 365  
 Lys Leu Asn Val Asn Gln Gln Pro Leu Leu Asp Val Glu Gly Asn Leu  
 370 375 380  
 Val Lys Leu His Thr Ala Glu Leu Glu Lys Pro Val Pro Gly Lys Gln  
 385 390 395 400  
 Asp Asn Ser Pro Ser Leu Lys Ser Thr Ala Asp Glu Lys Arg Val Ala  
 405 410 415  
 Ser Ile Ser Arg Leu Arg Glu Ala Phe Ser Leu His Pro Thr Lys Glu  
 420 425 430  
 Ile Lys Ser Arg Gly Pro Glu Thr Ala Glu Leu Thr Arg Ser Phe Pro  
 435 440 445  
 Ser Glu Lys Arg Gly Val Leu Ser Ser Tyr Pro Ser Asp Val Ile Ser  
 450 455 460  
 Tyr Arg Gly Leu Arg Gly Ser Gln Asp Lys Leu Val Ser Pro Thr Asp  
 465 470 475 480  
 Ser Pro Gly Asp Cys Met Asp Arg Glu Lys Ile Glu Lys Asp Ser Gly  
 485 490 495  
 Leu Ser Ser Thr Ser Ala Gly Ser Glu Glu Glu Phe Ser Thr Pro Glu  
 500 505 510  
 Val Ala Ser Ser Phe Ser Ser Asp Tyr Asn Val Ser Ser Leu Glu Asp  
 515 520 525  
 Arg Pro Ser Gln Glu Thr Ile Asn Cys Gly Asp Leu Asp Cys Arg Pro  
 530 535 540  
 Pro Gly Thr Gly Gln Ser Leu Lys Pro Glu Asp His Gly Tyr Gln Cys  
 545 550 555 560  
 Lys Ala Leu Pro Leu Ala Arg Leu Ser Pro Thr Asn Ala Lys Arg Phe  
 565 570 575  
 Lys Thr Glu Glu Arg Pro Ser Asn Val Asn Ile Ser Gln Arg Leu Pro  
 580 585 590  
 Gly Pro Gln Ser Thr Ser Ala Ala Glu Val Asp Val Ala Ile Lys Met  
 595 600 605

## MOR0251.ST25.txt

Asn Lys Arg Ile Val Leu Leu Glu Phe Ser Leu Ser Ser Leu Ala Lys  
 610 615 620

Arg Met Lys Gln Leu Gln His Leu Lys Ala Gln Asn Lys His Glu Leu  
 625 630 635 640

Ser Tyr Arg Lys Phe Arg Ala Lys Ile Cys Pro Gly Glu Asn Gln Ala  
 645 650 655

Ala Glu Asp Glu Leu Arg Lys Glu Ile Ser Lys Ser Met Phe Ala Glu  
 660 665 670

Met Glu Ile Leu Gly Gln Phe Asn Leu Gly Phe Ile Val Thr Lys Leu  
 675 680 685

Lys Glu Asp Leu Phe Leu Val Asp Gln His Ala Ala Asp Glu Lys Tyr  
 690 695 700

Asn Phe Glu Met Leu Gln Gln His Thr Val Leu Gln Ala Gln Arg Leu  
 705 710 715 720

Ile Thr Pro Gln Thr Leu Asn Leu Thr Ala Val Asn Glu Ala Val Leu  
 725 730 735

Ile Glu Asn Leu Glu Ile Phe Arg Lys Asn Gly Phe Asp Phe Val Ile  
 740 745 750

Asp Glu Asp Ala Pro Val Thr Glu Arg Ala Lys Leu Ile Ser Leu Pro  
 755 760 765

Thr Ser Lys Asn Trp Thr Phe Gly Pro Gln Asp Ile Asp Glu Leu Ile  
 770 775 780

Phe Met Leu Ser Asp Ser Pro Gly Val Met Cys Arg Pro Ser Arg Val  
 785 790 795 800

Arg Gln Met Phe Ala Ser Arg Ala Cys Arg Lys Ser Val Met Ile Gly  
 805 810 815

Thr Ala Leu Asn Ala Ser Glu Met Lys Lys Leu Ile Thr His Met Gly  
 820 825 830

Glu Met Asp His Pro Trp Asn Cys Pro His Gly Arg Pro Thr Met Arg  
 835 840 845

His Val Ala Asn Leu Asp Val Ile Ser Gln Asn  
 850 855

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 <211> 399  
 <212> DNA  
 <213> Mus musculus

<400> 33

## MOR0251.ST25.txt

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gagttgatag aaaatagtgt agatgctggt gctactacta ttgatctaag gcttaaagac      180
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gttgaaactt tcggctttcg gggggaagct ctgagctctc tgtgtgcact aagtgatgtc      360
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```

<210> 34  
 <211> 133  
 <212> PRT  
 <213> Mus musculus

<400> 34

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Met Glu Gln Thr Glu Gly Val Ser Thr Glu Cys Ala Lys Ala Ile Lys
1           5           10           15

```

```

Pro Ile Asp Gly Lys Ser Val His Gln Ile Cys Ser Gly Gln Val Ile
          20           25           30

```

```

Leu Ser Leu Ser Thr Ala Val Lys Glu Leu Ile Glu Asn Ser Val Asp
          35           40           45

```

```

Ala Gly Ala Thr Thr Ile Asp Leu Arg Leu Lys Asp Tyr Gly Val Asp
          50           55           60

```

```

Leu Ile Glu Val Ser Asp Asn Gly Cys Gly Val Glu Glu Glu Asn Phe
65           70           75           80

```

```

Glu Gly Leu Ala Leu Lys His His Thr Ser Lys Ile Gln Glu Phe Ala
          85           90           95

```

```

Asp Leu Thr Gln Val Glu Thr Phe Gly Phe Arg Gly Glu Ala Leu Ser
          100          105          110

```

```

Ser Leu Cys Ala Leu Ser Asp Val Thr Ile Ser Thr Cys His Gly Ser
          115          120          125

```

```

Ala Ser Val Gly Thr
          130

```

<210> 35  
 <211> 3099  
 <212> DNA  
 <213> Arabidopsis thaliana

<400> 35

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cgattgagga gattcatctg tttatagggt ttagcaaatg caaggagatt cttctccgct      180

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## MOR0251.ST25.txt

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cttgagcagc	cgctctagct	ttgccagtc	aactttgaat	acttttgta	ccatgggaaa	1620
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cgtggaaggc	gatcaacttg	atgatatggt	catctcaaag	gaagatatga	caccaagcga	1800
aagagattct	gaactaggca	atcggatttc	tcctggaaca	caagctgata	atgttgaaag	1860
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## MOR0251.ST25.txt

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 gttaatgcac atggatatta tcagggaaaa tggctttctt ctagaggaga atccaagtgc 2520  
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 aatgcagaag atagtagaac acttggcaga tctcgaatct ccttgggaatt gcccacacgg 2820  
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 <211> 923  
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 <213> Arabidopsis thaliana

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 20 25 30

Val Ile Leu Asp Leu Ser Ser Ala Val Lys Glu Leu Val Glu Asn Ser  
 35 40 45

Leu Asp Ala Gly Ala Thr Ser Ile Glu Ile Asn Leu Arg Asp Tyr Gly  
 50 55 60

Glu Asp Tyr Phe Gln Val Ile Asp Asn Gly Cys Gly Ile Ser Pro Thr  
 65 70 75 80

Asn Phe Lys Val Leu Ala Leu Lys His His Thr Ser Lys Leu Glu Asp  
 85 90 95

Phe Thr Asp Leu Leu Asn Leu Thr Thr Tyr Gly Phe Arg Gly Glu Ala  
 100 105 110

Leu Ser Ser Leu Cys Ala Leu Gly Asn Leu Thr Val Glu Thr Arg Thr  
 115 120 125

Lys Asn Glu Pro Val Ala Thr Leu Leu Thr Phe Asp His Ser Gly Leu  
 130 135 140

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Leu Thr Ala Glu Lys Lys Thr Ala Arg Gln Ile Gly Thr Thr Val Thr
145                      150                      155                      160

Val Arg Lys Leu Phe Ser Asn Leu Pro Val Arg Ser Lys Glu Phe Lys
                      165                      170                      175

Arg Asn Ile Arg Lys Glu Tyr Gly Lys Leu Val Ser Leu Leu Asn Ala
                      180                      185                      190

Tyr Ala Leu Ile Ala Lys Gly Val Arg Phe Val Cys Ser Asn Thr Thr
                      195                      200                      205

Gly Lys Asn Pro Lys Ser Val Val Leu Asn Thr Gln Gly Arg Gly Ser
210                      215                      220

Leu Lys Asp Asn Ile Ile Thr Val Phe Gly Ile Ser Thr Phe Thr Ser
225                      230                      235                      240

Leu Gln Pro Val Ser Ile Cys Val Ser Glu Asp Cys Arg Val Glu Gly
                      245                      250                      255

Phe Leu Ser Lys Pro Gly Gln Gly Thr Gly Arg Asn Leu Ala Asp Arg
                      260                      265                      270

Gln Tyr Phe Phe Ile Asn Gly Arg Pro Val Asp Met Pro Lys Val Ser
275                      280                      285

Lys Leu Val Asn Glu Leu Tyr Lys Asp Thr Ser Ser Arg Lys Tyr Pro
290                      295                      300

Val Thr Ile Leu Asp Phe Ile Val Pro Gly Gly Ala Cys Asp Leu Asn
305                      310                      315                      320

Val Thr Pro Asp Lys Arg Lys Val Phe Phe Ser Asp Glu Thr Ser Val
                      325                      330                      335

Ile Gly Ser Leu Arg Glu Gly Leu Asn Glu Ile Tyr Ser Ser Ser Asn
                      340                      345                      350

Ala Ser Tyr Ile Val Asn Arg Phe Glu Glu Asn Ser Glu Gln Pro Asp
                      355                      360                      365

Lys Ala Gly Val Ser Ser Phe Gln Lys Lys Ser Asn Leu Leu Ser Glu
370                      375                      380

Gly Ile Val Leu Asp Val Ser Ser Lys Thr Arg Leu Gly Glu Ala Ile
385                      390                      395                      400

Glu Lys Glu Asn Pro Ser Leu Arg Glu Val Glu Ile Asp Asn Ser Ser
                      405                      410                      415

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## MOR0251.ST25.txt

Pro Met Glu Lys Phe Lys Phe Glu Ile Lys Ala Cys Gly Thr Lys Lys  
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Gly Glu Gly Ser Leu Ser Val His Asp Val Thr His Leu Asp Lys Thr  
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Pro Ser Lys Gly Leu Pro Gln Leu Asn Val Thr Glu Lys Val Thr Asp  
 450 455 460

Ala Ser Lys Asp Leu Ser Ser Arg Ser Ser Phe Ala Gln Ser Thr Leu  
 465 470 475 480

Asn Thr Phe Val Thr Met Gly Lys Arg Lys His Glu Asn Ile Ser Thr  
 485 490 495

Ile Leu Ser Glu Thr Pro Val Leu Arg Asn Gln Thr Ser Ser Tyr Arg  
 500 505 510

Val Glu Lys Ser Lys Phe Glu Val Arg Ala Leu Ala Ser Arg Cys Leu  
 515 520 525

Val Glu Gly Asp Gln Leu Asp Asp Met Val Ile Ser Lys Glu Asp Met  
 530 535 540

Thr Pro Ser Glu Arg Asp Ser Glu Leu Gly Asn Arg Ile Ser Pro Gly  
 545 550 555 560

Thr Gln Ala Asp Asn Val Glu Arg His Glu Arg Glu His Glu Lys Pro  
 565 570 575

Ile Arg Phe Glu Glu Pro Thr Ser Asp Asn Thr Leu Thr Lys Gly Asp  
 580 585 590

Val Glu Arg Val Ser Glu Asp Asn Pro Arg Cys Ser Gln Pro Leu Arg  
 595 600 605

Ser Val Ala Thr Val Leu Asp Ser Pro Ala Gln Ser Thr Gly Pro Lys  
 610 615 620

Met Phe Ser Thr Leu Glu Phe Ser Phe Gln Asn Leu Arg Thr Arg Arg  
 625 630 635 640

Leu Glu Arg Leu Ser Arg Leu Gln Ser Thr Gly Tyr Val Ser Lys Cys  
 645 650 655

Met Asn Thr Pro Gln Pro Lys Lys Cys Phe Ala Ala Ala Thr Leu Glu  
 660 665 670

Leu Ser Gln Pro Asp Asp Glu Glu Arg Lys Ala Arg Ala Leu Ala Ala  
 675 680 685

Ala Thr Ser Glu Leu Glu Arg Leu Phe Arg Lys Glu Asp Phe Arg Arg  
 690 695 700



Met Gln Val Leu Gly Gln Phe Asn Leu Gly Phe Ile Ile Ala Lys Leu  
705 710 715 720

Glu Arg Asp Leu Phe Ile Val Asp Gln His Ala Ala Asp Glu Lys Phe  
725 730 735

Asn Phe Glu His Leu Ala Arg Ser Thr Val Leu Asn Gln Gln Pro Leu  
740 745 750

Leu Gln Pro Leu Asn Leu Glu Leu Ser Pro Glu Glu Glu Val Thr Val  
755 760 765

Leu Met His Met Asp Ile Ile Arg Glu Asn Gly Phe Leu Leu Glu Glu  
770 775 780

Asn Pro Ser Ala Pro Pro Gly Lys His Phe Arg Leu Arg Ala Ile Pro  
785 790 795 800

Tyr Ser Lys Asn Ile Thr Phe Gly Val Glu Asp Leu Lys Asp Leu Ile  
805 810 815

Ser Thr Leu Gly Asp Asn His Gly Glu Cys Ser Val Ala Ser Ser Tyr  
820 825 830

Lys Thr Ser Lys Thr Asp Ser Ile Cys Pro Ser Arg Val Arg Ala Met  
835 840 845

Leu Ala Ser Arg Ala Cys Arg Ser Ser Val Met Ile Gly Asp Pro Leu  
850 855 860

Arg Lys Asn Glu Met Gln Lys Ile Val Glu His Leu Ala Asp Leu Glu  
865 870 875 880

Ser Pro Trp Asn Cys Pro His Gly Arg Pro Thr Met Arg His Leu Val  
885 890 895

Asp Leu Thr Thr Leu Leu Thr Leu Pro Asp Asp Asp Asn Val Asn Asp  
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Asp Asp Asp Asp Asp Ala Thr Ile Ser Leu Ala  
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gtcaaggagc ttgtcgagaa tagtctcgac gccggcgcca ccagtataga gattaacctc 180

## MOR0251.ST25.txt

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<210> 38  
<211> 133  
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<400> 38

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20 25 30

Val Ile Leu Asp Leu Ser Ser Ala Val Lys Glu Leu Val Glu Asn Ser  
35 40 45

Leu Asp Ala Gly Ala Thr Ser Ile Glu Ile Asn Leu Arg Asp Tyr Gly  
50 55 60

Glu Asp Tyr Phe Gln Val Ile Asp Asn Gly Cys Gly Ile Ser Pro Thr  
65 70 75 80

Asn Phe Lys Val Leu Ala Leu Lys His His Thr Ser Lys Leu Glu Asp  
85 90 95

Phe Thr Asp Leu Leu Asn Leu Thr Thr Tyr Gly Phe Arg Gly Glu Ala  
100 105 110

Leu Ser Ser Leu Cys Ala Leu Gly Asn Leu Thr Val Glu Thr Arg Thr  
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Lys Asn Glu Pro Val  
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## MOR0251.ST25.txt

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 tcattggcat ga 2772

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 <211> 923  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 40

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Val Ile Leu Asp Leu Ser Ser Ala Val Lys Glu Leu Val Glu Asn Ser  
 35 40 45

Leu Asp Ala Gly Ala Thr Ser Ile Glu Ile Asn Leu Arg Asp Tyr Gly  
 50 55 60

Glu Asp Tyr Phe Gln Val Ile Asp Asn Gly Cys Gly Ile Ser Pro Thr  
 65 70 75 80

Asn Phe Lys Val Leu Ala Leu Lys His His Thr Ser Lys Leu Glu Asp  
 85 90 95

Phe Thr Asp Leu Leu Asn Leu Thr Thr Tyr Gly Phe Arg Gly Glu Ala  
 100 105 110

Leu Ser Ser Leu Cys Ala Leu Gly Asn Leu Thr Val Glu Thr Arg Thr  
 115 120 125

Lys Asn Glu Pro Val Ala Thr Leu Leu Thr Phe Asp His Ser Gly Leu  
 130 135 140

Leu Thr Ala Glu Lys Lys Thr Ala Arg Gln Ile Gly Thr Thr Val Thr  
 145 150 155 160

Val Arg Lys Leu Phe Ser Asn Leu Pro Val Arg Ser Lys Glu Phe Lys  
 165 170 175

Arg Asn Ile Arg Lys Glu Tyr Gly Lys Leu Val Ser Leu Leu Asn Ala  
 180 185 190

Tyr Ala Leu Ile Ala Lys Gly Val Arg Phe Val Cys Ser Asn Thr Thr  
 195 200 205

Gly Lys Asn Pro Lys Ser Val Val Leu Asn Thr Gln Gly Arg Gly Ser  
 210 215 220  
 Leu Lys Asp Asn Ile Ile Thr Val Phe Gly Ile Ser Thr Phe Thr Ser  
 225 230 235 240  
 Leu Gln Pro Val Ser Ile Cys Val Ser Glu Asp Cys Arg Val Glu Gly  
 245 250 255  
 Phe Leu Ser Lys Pro Gly Gln Gly Thr Gly Arg Asn Leu Ala Asp Arg  
 260 265 270  
 Gln Tyr Phe Phe Ile Asn Gly Arg Pro Val Asp Met Pro Lys Val Ser  
 275 280 285  
 Lys Leu Val Asn Glu Leu Tyr Lys Asp Thr Ser Ser Arg Lys Tyr Pro  
 290 295 300  
 Val Thr Ile Leu Asp Phe Ile Val Pro Gly Gly Ala Cys Asp Leu Asn  
 305 310 315 320  
 Val Thr Pro Asp Lys Arg Lys Val Phe Phe Ser Asp Glu Thr Ser Val  
 325 330 335  
 Ile Gly Ser Leu Arg Glu Gly Leu Asn Glu Ile Tyr Ser Ser Ser Asn  
 340 345 350  
 Ala Ser Tyr Ile Val Asn Arg Phe Glu Glu Asn Ser Glu Gln Pro Asp  
 355 360 365  
 Lys Ala Gly Val Ser Ser Phe Gln Lys Lys Ser Asn Leu Leu Ser Glu  
 370 375 380  
 Gly Ile Val Leu Asp Val Ser Ser Lys Thr Arg Leu Gly Glu Ala Ile  
 385 390 395 400  
 Glu Lys Glu Asn Pro Ser Leu Arg Glu Val Glu Ile Asp Asn Ser Ser  
 405 410 415  
 Pro Met Glu Lys Phe Lys Phe Glu Ile Lys Ala Cys Gly Thr Lys Lys  
 420 425 430  
 Gly Glu Gly Ser Leu Ser Val His Asp Val Thr His Leu Asp Lys Thr  
 435 440 445  
 Pro Ser Lys Gly Leu Pro Gln Leu Asn Val Thr Glu Lys Val Thr Asp  
 450 455 460  
 Ala Ser Lys Asp Leu Ser Ser Arg Ser Ser Phe Ala Gln Ser Thr Leu  
 465 470 475 480

Asn Thr Phe Val Thr Met Gly Lys Arg Lys His Glu Asn Ile Ser Thr  
 485 490 495

Ile Leu Ser Glu Thr Pro Val Leu Arg Asn Gln Thr Ser Ser Tyr Arg  
 500 505 510

Val Glu Lys Ser Lys Phe Glu Val Arg Ala Leu Ala Ser Arg Cys Leu  
 515 520 525

Val Glu Gly Asp Gln Leu Asp Asp Met Val Ile Ser Lys Glu Asp Met  
 530 535 540

Thr Pro Ser Glu Arg Asp Ser Glu Leu Gly Asn Arg Ile Ser Pro Gly  
 545 550 555 560

Thr Gln Ala Asp Asn Val Glu Arg His Glu Arg Glu His Glu Lys Pro  
 565 570 575

Ile Arg Phe Glu Glu Pro Thr Ser Asp Asn Thr Leu Thr Lys Gly Asp  
 580 585 590

Val Glu Arg Val Ser Glu Asp Asn Pro Arg Cys Ser Gln Pro Leu Arg  
 595 600 605

Ser Val Ala Thr Val Leu Asp Ser Pro Ala Gln Ser Thr Gly Pro Lys  
 610 615 620

Met Phe Ser Thr Leu Glu Phe Ser Phe Gln Asn Leu Arg Thr Arg Arg  
 625 630 635 640

Leu Glu Arg Leu Ser Arg Leu Gln Ser Thr Gly Tyr Val Ser Lys Cys  
 645 650 655

Met Asn Thr Pro Gln Pro Lys Lys Cys Phe Ala Ala Ala Thr Leu Glu  
 660 665 670

Leu Ser Gln Pro Asp Asp Glu Glu Arg Lys Ala Arg Ala Leu Ala Ala  
 675 680 685

Ala Thr Ser Glu Leu Glu Arg Leu Phe Arg Lys Glu Asp Phe Arg Arg  
 690 695 700

Met Gln Val Leu Gly Gln Phe Asn Leu Gly Phe Ile Ile Ala Lys Leu  
 705 710 715 720

Glu Arg Asp Leu Phe Ile Val Asp Gln His Ala Ala Asp Glu Lys Phe  
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Asn Phe Glu His Leu Ala Arg Ser Thr Val Leu Asn Gln Gln Pro Leu  
 740 745 750

Leu Gln Pro Leu Asn Leu Glu Leu Ser Pro Glu Glu Glu Val Thr Val  
 755 760 765

Leu Met His Met Asp Ile Ile Arg Glu Asn Gly Phe Leu Leu Glu Glu  
 770 775 780

Asn Pro Ser Ala Pro Pro Gly Lys His Phe Arg Leu Arg Ala Ile Pro  
 785 790 795 800

Tyr Ser Lys Asn Ile Thr Phe Gly Val Glu Asp Leu Lys Asp Leu Ile  
 805 810 815

Ser Thr Leu Gly Asp Asn His Gly Glu Cys Ser Val Ala Ser Ser Tyr  
 820 825 830

Lys Thr Ser Lys Thr Asp Ser Ile Cys Pro Ser Arg Val Arg Ala Met  
 835 840 845

Leu Ala Ser Arg Ala Cys Arg Ser Ser Val Met Ile Gly Asp Pro Leu  
 850 855 860

Arg Lys Asn Glu Met Gln Lys Ile Val Glu His Leu Ala Asp Leu Glu  
 865 870 875 880

Ser Pro Trp Asn Cys Pro His Gly Arg Pro Thr Met Arg His Leu Val  
 885 890 895

Asp Leu Thr Thr Leu Leu Thr Leu Pro Asp Asp Asp Asn Val Asn Asp  
 900 905 910

Asp Asp Asp Asp Asp Ala Thr Ile Ser Leu Ala  
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## MOR0251.ST25.txt

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## MOR0251.ST25.txt

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 Lys Arg Leu Lys Met Leu Gln Asp Pro Val Cys Gly Glu Lys Lys Glu  
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 Val Asn Glu Gly Thr Lys Phe Glu Trp Leu Glu Ser Ser Arg Ile Arg  
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## MOR0251.ST25.txt

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Tyr Phe Lys Gly Ser Ser Glu Ser Trp Asn Cys Ala Val Asp Gly Leu  
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Asn Glu Cys Asp Val Ala Leu Ser Ala Leu Gly Glu Leu Ile Asn His  
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## MOR0251.ST25.txt

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## MOR0251.ST25.txt

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 245 250 255

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 260 265 270

Leu Leu Ser Asn Glu Asp Asn Tyr Gly Asn Phe Thr Ile Arg Arg Tyr  
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Asp Ile Gly Gly Phe Met Arg Leu Asp Ser Ala Ala Met Arg Ala Leu  
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Arg Leu Asp Ile Val Gln Cys Phe Val Glu Glu Ala Gly Leu Arg Gln  
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Tyr Gln Ser Ala Ile Arg Leu Pro Phe Ile Lys Thr Ala Met Gln Gln  
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Tyr Thr Gly Glu Phe Ala Ser Leu Ile Ser Glu Arg Tyr Leu Lys Lys  
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Leu Glu Ala Leu Ser Asp Gln Asp His Leu Gly Lys Phe Ile Asp Leu  
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Val Glu Cys Ser Val Asp Leu Asp Gln Leu Glu Asn Gly Glu Tyr Met  
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Ile Ser Ser Asn Tyr Asp Thr Lys Leu Ala Ser Leu Lys Asp Gln Lys  
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Glu Leu Leu Glu Gln Gln Ile His Glu Leu His Lys Lys Thr Ala Ile  
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Glu Leu Asp Leu Gln Val Asp Lys Ala Leu Lys Leu Asp Lys Ala Ala  
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Gln Phe Gly His Val Phe Arg Ile Thr Lys Lys Glu Glu Pro Lys Ile  
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 Ala Gln Asp Trp Val Asn Phe Ile Pro Asn Asp Cys Arg Leu Met Arg  
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## MOR0251.ST25.txt

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Val Ala Asn Phe His Val Ser Ala His Ile Asp Thr Glu Ser Arg Lys  
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820 825 830

Gly Ile His Val Ala Glu Phe Ala Asn Phe Pro Glu Ser Val Val Ala  
835 840 845

Leu Ala Arg Glu Lys Ala Ala Glu Leu Glu Asp Phe Ser Pro Ser Ser  
850 855 860

Met Ile Ile Asn Asn Glu Glu Ser Gly Lys Arg Lys Ser Arg Glu Asp  
865 870 875 880

Asp Pro Asp Glu Val Ser Arg Gly Ala Glu Arg Ala His Lys Phe Leu  
885 890 895

Lys Glu Phe Ala Ala Met Pro Leu Asp Lys Met Glu Leu Lys Asp Ser  
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## MOR0251.ST25.txt

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```

```

Pro Pro Pro Lys Ile Ser Ala Thr Val Ser Phe Ser Pro Ser Lys Arg
35          40          45

```

```

Lys Leu Leu Ser Asp His Leu Ala Ala Ala Ser Pro Lys Lys Pro Lys
50          55          60

```

```

Leu Ser Pro His Thr Gln Asn Pro Val Pro Asp Pro Asn Leu His Gln
65          70          75          80

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85          90          95

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```

Glu Thr Ser Ser Ser Arg Lys Tyr Thr Pro Leu Glu Gln Gln Val Val
100          105          110

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Glu Leu Lys Ser Lys Tyr Pro Asp Val Val Leu Met Val Glu Val Gly
115          120          125

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Tyr Arg Tyr Arg Phe Phe Gly Glu Asp Ala Glu Ile Ala Ala Arg Val
130          135          140

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Leu Gly Ile Tyr Ala His Met Asp His Asn Phe Met Thr Ala Ser Val
145          150          155          160

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 Tyr Thr Lys Ala Thr Leu Glu Ala Ala Glu Asp Ile Ser Gly Gly Cys  
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 Pro Leu Ser Gln Gln Thr Glu Lys Phe Leu Val Ala His Ala Gly Pro  
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 Thr Ser Asn Val Arg Val Glu Arg Ala Ser Leu Asp Cys Phe Ser Asn  
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 370 375 380  
 Thr Val Gln Ala Leu Ala Leu Thr Phe Cys His Leu Lys Gln Phe Gly  
 385 390 395 400  
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 Asn Thr Glu Met Thr Leu Ser Ala Asn Thr Leu Gln Gln Leu Glu Val  
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## MOR0251.ST25.txt

Val Lys Asn Asn Ser Asp Gly Ser Glu Ser Gly Ser Leu Phe His Asn  
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Val Thr His Pro Leu Cys Asp Arg Asn Leu Ile Ser Ala Arg Leu Asp  
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Ala Val Ser Glu Ile Ser Ala Cys Met Gly Ser His Ser Ser Ser Gln  
 485 490 495

Leu Ser Ser Glu Leu Val Glu Glu Gly Ser Glu Arg Ala Ile Val Ser  
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Pro Glu Phe Tyr Leu Val Leu Ser Ser Val Leu Thr Ala Met Ser Arg  
 515 520 525

Ser Ser Asp Ile Gln Arg Gly Ile Thr Arg Ile Phe His Arg Thr Ala  
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Lys Ala Thr Glu Phe Ile Ala Val Met Glu Ala Ile Leu Leu Ala Gly  
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Lys Gln Ile Gln Arg Leu Gly Ile Lys Gln Asp Ser Glu Met Arg Ser  
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Met Gln Ser Ala Thr Val Arg Ser Thr Leu Leu Arg Lys Leu Ile Ser  
 580 585 590

Val Ile Ser Ser Pro Val Val Val Asp Asn Ala Gly Lys Leu Leu Ser  
 595 600 605

Ala Leu Asn Lys Glu Ala Ala Val Arg Gly Asp Leu Leu Asp Ile Leu  
 610 615 620

Ile Thr Ser Ser Asp Gln Phe Pro Glu Leu Ala Glu Ala Arg Gln Ala  
 625 630 635 640

Val Leu Val Ile Arg Glu Lys Leu Asp Ser Ser Ile Ala Ser Phe Arg  
 645 650 655

Lys Lys Leu Ala Ile Arg Asn Leu Glu Phe Leu Gln Val Ser Gly Ile  
 660 665 670

Thr His Leu Ile Glu Leu Pro Val Asp Ser Lys Val Pro Met Asn Trp  
 675 680 685

Val Lys Val Asn Ser Thr Lys Lys Thr Ile Arg Tyr His Pro Pro Glu  
 690 695 700

Ile Val Ala Gly Leu Asp Glu Leu Ala Leu Ala Thr Glu His Leu Ala  
 705 710 715 720

Ile Val Asn Arg Ala Ser Trp Asp Ser Phe Leu Lys Ser Phe Ser Arg  
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 Tyr Tyr Thr Asp Phe Lys Ala Ala Val Gln Ala Leu Ala Ala Leu Asp  
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 Lys Leu His Val Leu Asp Gly Val Phe Thr Arg Met Gly Ala Ser Asp  
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 Ser Ile Gln His Gly Arg Ser Thr Phe Leu Glu Glu Leu Ser Glu Ala  
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 Ser His Ile Ile Arg Thr Cys Ser Ser Arg Ser Leu Val Ile Leu Asp  
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 Glu Leu Gly Arg Gly Thr Ser Thr His Asp Gly Val Ala Ile Ala Tyr  
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 Val Thr His Tyr Pro Glu Ile Ala Glu Ile Ser Asn Gly Phe Pro Gly  
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 Ser Val Gly Thr Tyr His Val Ser Tyr Leu Thr Leu Gln Lys Asp Lys  
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 Gly Ser Tyr Asp His Asp Asp Val Thr Tyr Leu Tyr Lys Leu Val Arg  
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## MOR0251.ST25.txt

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Pro Glu Gly His Glu Glu Pro Arg Gly Ala Glu Glu Ser Ile Ser  
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Ala Leu Gly Asp Leu Phe Ala Asp Leu Lys Phe Ala Leu Ser Glu  
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Glu Asp Pro Trp Lys Ala Phe Glu Phe Leu Lys His Ala Trp Lys  
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Ile Ala Gly Lys Ile Arg Leu Lys Pro Thr Cys Ser Phe  
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## MOR0251.ST25.txt

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&lt;211&gt; 1324

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&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 48

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 65 70 75 80  
 Pro Ala Arg Ser Pro Ser Pro Gly Pro Asp Thr Pro Ser Pro Val Gln  
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 Val Arg Val Tyr Trp Pro Leu Asp Lys Lys Trp Tyr Asp Gly Ser Val  
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 145 150 155 160  
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 165 170 175  
 Val Gly Glu Lys Ser Gly Asp Arg Phe Asn Arg Leu Lys Arg Gly Ala  
 180 185 190  
 Ser Ala Leu Arg Lys Val Val Thr Asp Ser Asp Asp Asp Val Glu Met  
 195 200 205  
 Gly Asn Val Glu Glu Asp Lys Ser Asp Gly Asp Asp Ser Ser Asp Glu  
 210 215 220  
 Asp Trp Gly Lys Asn Val Gly Lys Glu Val Cys Glu Ser Glu Glu Asp  
 225 230 235 240  
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 Asp Ser Arg Lys Arg Lys Thr Ser Glu Val Thr Lys Ser Gly Gly Glu  
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Lys Gly Leu Glu Asp Asn Val Leu Asp Gly Asp Ala Leu Ala Arg Phe  
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Gly Ala Arg Asp Ser Glu Lys Phe Arg Phe Leu Gly Val Asp Arg Arg  
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Asp Ala Lys Arg Arg Arg Pro Thr Asp Glu Asn Tyr Asp Pro Arg Thr  
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Leu Tyr Leu Pro Pro Asp Phe Val Lys Lys Leu Thr Gly Gly Gln Arg  
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Gln Trp Trp Glu Phe Lys Ala Lys His Met Asp Lys Val Val Phe Phe  
 385 390 395 400

Lys Met Gly Lys Phe Tyr Glu Leu Phe Glu Met Asp Ala His Val Gly  
 405 410 415

Ala Lys Glu Leu Asp Ile Gln Tyr Met Lys Gly Glu Gln Pro His Cys  
 420 425 430

Gly Phe Pro Glu Lys Asn Phe Ser Val Asn Ile Glu Lys Leu Val Arg  
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Lys Gly Tyr Arg Val Leu Val Val Glu Gln Thr Glu Thr Pro Asp Gln  
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Leu Glu Gln Arg Arg Lys Glu Thr Gly Ser Lys Asp Lys Val Val Lys  
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Arg Glu Val Cys Ala Val Val Thr Lys Gly Thr Leu Thr Asp Gly Glu  
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Met Leu Leu Thr Asn Pro Asp Ala Ser Tyr Leu Met Ala Leu Thr Glu  
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Gly Gly Glu Ser Leu Thr Asn Pro Thr Ala Glu His Asn Phe Gly Val  
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Cys Leu Val Asp Val Ala Thr Gln Lys Ile Ile Leu Gly Gln Phe Lys  
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Asp Asp Gln Asp Cys Ser Ala Leu Ser Cys Leu Leu Ser Glu Met Arg  
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Pro Val Glu Ile Ile Lys Pro Ala Lys Val Leu Ser Tyr Ala Thr Glu  
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Arg Thr Ile Val Arg Gln Thr Arg Asn Pro Leu Val Asn Asn Leu Val  
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 645 650 655  
 Leu Gly Gly Ala Ile Tyr Tyr Leu Arg Gln Ala Phe Leu Asp Glu Ser  
 660 665 670  
 Leu Leu Arg Phe Ala Lys Phe Glu Ser Leu Pro Tyr Cys Asp Phe Ser  
 675 680 685  
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 690 695 700  
 Asn Leu Glu Ile Phe Glu Asn Ser Arg Asn Gly Gly Tyr Ser Gly Thr  
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 740 745 750  
 Glu Arg Gln Asp Ala Val Ala Ile Leu Arg Gly Glu Asn Leu Pro Tyr  
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 835 840 845  
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## MOR0251.ST25.txt

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Thr Val Glu Glu Phe Glu Ser Ser Leu Lys Lys His Leu Lys Glu Gln  
 900 905 910

Arg Lys Leu Leu Gly Asp Ala Ser Ile Asn Tyr Val Thr Val Gly Lys  
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Asp Glu Tyr Leu Leu Glu Val Pro Glu Ser Leu Ser Gly Ser Val Pro  
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His Asp Tyr Glu Leu Cys Ser Ser Lys Lys Gly Val Ser Arg Tyr Trp  
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Thr Pro Thr Ile Lys Lys Leu Leu Lys Glu Leu Ser Gln Ala Lys Ser  
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Glu Lys Glu Ser Ala Leu Lys Ser Ile Ser Gln Arg Leu Ile Gly Arg  
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Glu Leu Asp Val Leu Ile Ser Leu Ala Phe Ala Ser Asp Ser Tyr  
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Glu Gly Val Arg Cys Arg Pro Val Ile Ser Gly Ser Thr Ser Asp  
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Gly Val Pro His Leu Ser Ala Thr Gly Leu Gly His Pro Val Leu  
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Arg Gly Asp Ser Leu Gly Arg Gly Ser Phe Val Pro Asn Asn Val  
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Lys Ile Gly Gly Ala Glu Lys Ala Ser Phe Ile Leu Leu Thr Gly  
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Pro Asn Met Gly Gly Lys Ser Thr Leu Leu Arg Gln Val Cys Leu  
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Ala Val Ile Leu Ala Gln Ile Gly Ala Asp Val Pro Ala Glu Thr  
 1100 1105 1110

Phe Glu Val Ser Pro Val Asp Lys Ile Cys Val Arg Met Gly Ala  
 1115 1120 1125

Lys Asp His Ile Met Ala Gly Gln Ser Thr Phe Leu Thr Glu Leu  
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Ser Glu Thr Ala Val Met Leu Thr Ser Ala Thr Arg Asn Ser Leu  
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Glu Val Ile Gln Arg Pro Ser Ser Ala Val Lys Glu Leu Ile Glu Asn  
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Ser Leu Asp Ala Gly Ala Ser Ser Val Ser Val Ala Val Lys Asp Gly  
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Gly Leu Lys Leu Ile Gln Val Ser Asp Asp Gly His Gly Ile Arg Phe  
 65 70 75 80

Glu Asp Leu Ala Ile Leu Cys Glu Arg His Thr Thr Ser Lys Leu Ser  
 85 90 95

Ala Tyr Glu Asp Leu Gln Thr Ile Lys Ser Met Gly Phe Arg Gly Glu  
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Ala Leu Ala Ser Met Thr Tyr Val Gly His Val Thr Val Thr Thr Ile  
 115 120 125

Thr Glu Gly Gln Leu His Gly Tyr Arg Val Ser Tyr Arg Asp Gly Val  
 130 135 140

Met Glu Asn Glu Pro Lys Pro Cys Ala Ala Val Lys Gly Thr Gln Val  
 145 150 155 160

Met Val Glu Asn Leu Phe Tyr Asn Met Val Ala Arg Lys Lys Thr Leu  
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Gln Asn Ser Asn Asp Asp Tyr Pro Lys Ile Val Asp Phe Ile Ser Arg  
 180 185 190

Phe Ala Val His His Ile Asn Val Thr Phe Ser Cys Arg Lys His Gly  
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Ala Ile Arg Ser Val Tyr Gly Ala Ser Val Val Arg Asp Leu Ile Glu  
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Ile Tyr Met Ser Ile His Leu Pro Ser Glu His Val Asp Val Asn Ile
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His Pro Thr Lys Lys Glu Val Ser Leu Leu Asn Gln Glu Arg Ile Ile
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      340                      345          350

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Thr Lys Ser Gln Lys Ile Pro Val Ser Gln Met Val Arg Thr Asp Pro
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Lys Glu Leu Met Tyr Gln Gln Ala Leu Cys Arg Phe Gly Asn Phe Asn
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Glu Lys Glu Cys Phe Arg Thr Val Ala Ser Ala Val Gly Asn Phe Tyr  
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Leu Tyr Lys Lys Asn Arg Asp Ser Met Ala Asp Glu His Ala Glu Asn  
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Phe Pro Ser Met Arg Leu Phe Leu Lys Pro Pro Lys Ser Met Ala Thr  
 690 695 700

Asp Gly Thr Phe Val Gln Val Ala Ser Leu Glu Lys Leu Tyr Lys Ile  
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Phe Glu Arg Cys